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PRESIDENT'S ADDRESS*

S. LEONARD ROSENTHAL, D.D.S., F.A.C.D., F.A.D.M.

I gratefully accept the honor you have conferred upon me, though I confess it is with considerable trepidation when I see the footprints of my predecessors and realize how big their shoes are for me to fill. Under their leadership, we have developed from a small group of men with vision to one of the largest and most progressive specialty organizations. However, I take courage from the knowledge that the Academy has not achieved its position through the efforts of any one officer, but by the combined interest and enthusiasm of every member. I hope you will maintain that spirit to insure our continued progress.

Just as a victorious army occasionally stops to consolidate its forces lest it spread itself too thin, so I believe, should we. Not that we shall fail to welcome new members from distant places, but rather that growth of established Sections should be our first order of business together with the formation of new Sections instigated by our present members, alert to invite eligible men in their vicinity to join with us.

Dental and Oral Medicine has achieved recognition as an important branch of the healing arts. All dental schools have included it in their curriculum and many have established a separate department to teach the subject. Most State Board examinations include questions in this science while some devote a separate examination to the field. We should encourage and reward advanced knowledge in this area by the establishment of a specialty board to set up standards of graduate education and to certify those who have met the requirements. The American Academy of Dental Medicine is the logical sponsor for such a board.

I hope to attend a meeting of each Section this year and only await your invitations.

In ancient times, ten was a magic number of good omen. Let us turn heretic to science and give credence to this superstition by making this, our tenth year, outstandingly successful. We cannot begin better than by recognition of the debt we owe George Clarke for his hard and fruitful work. I shall lean heavily on him and on all of you in the coming year.

* Presented before the Ninth Annual Meeting of the American Academy of Dental Medicine, New York, N. Y., May 13-15, 1955.

RETIRING PRESIDENT'S REPORT*

GEORGE F. CLARKE, D.M.D.

MY FELLOW MEMBERS—

The ninth year of the American Academy of Dental Medicine now draws to a close.

It's growth in this short time, by any standards, proves that our Academy was conceived on a sound basis, and is filling a long felt need in the profession of Dentistry. While the mechanical aspects of our profession may be obtained in many of our splendid dental organizations, the investigation of Dental Medicine, which is becoming more and more important, is available to the general practitioner in few places other than the Academy.

But our success has been built on the hard work and devotion of all the officers and members, past and present, who have found that the Academy fills an important need in their professional lives, and who have given so generously of their time and their abilities to keep us on the path of progress.

This year, we hope, has maintained that trend. Certain minor changes in administration, such as putting the President-Elect and the Vice President in direct charge of some committees, should improve the mechanics of the organization. Let us review the past year.

Membership. There has been an increased interest in membership by members of the profession with a serious desire to know more of Dental Medicine. Since membership is only by invitation, our growth must be slow. Membership now totals 671, with 62 new names to be presented for your approval at this meeting. The Membership Committee, under the chairmanship of Abraham Goldstein, has done a splendid job on this difficult assignment.

Journal. Our Journal of Dental Medicine, often called the "show window" of the Academy, is one of the outstanding professional journals published today. Its scientific papers make it a library of Dental Medicine and Research. But another feature is also of great importance. As a bulletin of the Academy it reports and records affairs of the Academy, of the Sections, and of individual members.

Finances. The Treasurer's report will again reveal a splendid financial condition. But in line with other factors of our economy, the cost of running the Academy is also increasing. I believe we should consider a slight increase in our very modest dues.

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* Presented before the Ninth Annual Meeting of the American Academy of Dental Medicine, New York, N. Y., May 13-15, 1955.

Constitution. The Constitution Committee has worked diligently to re-evaluate our Constitution and suggest changes to clarify our laws and keep pace with the growth of our organization. Their recommendations will be presented for your approval at this meeting.

Sections. The Sections Committee, whose membership this year includes all Sections Delegates, has entered a new and important field of activity. Added to its work in promoting and advising on the formation of new Sections, it is now a committee of liaison between the various Sections, and between the Sections and the Academy. This is important, because in time, much of the strength of the Academy will lay in the strength and activities of the Sections.

Specialty Board. The Council on Dental Education is not at present, because of a re-evaluation of the whole field of Specialty Boards, approving any applications for formation of new boards. Our application is still pending, and at a recent Workshop on Specialty Boards, our President-Elect presented our case strongly before the Council.

Graduate Awards. Our program of Graduate Award Certificates to seniors in dental and medical schools who show proficiency and special interest in Dental Medicine is of great value. It stimulates interest in Dental Medicine and obtains favorable attention for the Academy from the students and the schools. Every effort should be made to keep in contact with these Award winners so that we may invite them to membership when they are eligible.

Visitations. Official visits to the various Sections was inspiring. Attendance was splendid (nearly 100% in most Sections), programs interesting, and enthusiasm high. The department of our Journal of Dental Medicine on Academy Proceedings will give you a report on these splendid meetings.

On these visits, I found an intense desire for continuing education in Dental Medicine. Typifying this was the massive Dento-Medical Relations meeting that your incoming President and I attended in January, sponsored by the Montreal Section. This meeting, attended by nearly three hundred physicians and dentists, gave each profession an understanding of how each could be helped by the other.

Progress in dental health is so rapid that it is difficult for the average dentist to keep up to date. But his continuing education is fully as important as the education of the student, for with his formal education over, he is the one who actually provides the necessary services for his patient.

It may be that our whole system of postgraduate instruction should be re-evaluated. It is not being used by enough of the men who need it. Much of this education is pointed toward specialization rather than to improvement in general practice.

With the desire and the necessity for continuing education, we may well take a page from the American Academy of General Practice in Medicine. They promote and insist that their members do a required amount of both formal and informal study every year under penalty of losing membership in the Academy. I believe that we could and should do likewise. There are many new technics now used in education to supplement our usual postgraduate courses. They are especially valuable to the dentist who, through professional and family responsibilities finds it difficult to leave his practice and return to school.

Telephone, radio, and television are now being used successfully in education. Realizing that every dentist has a clinic in his own office, Dr. Harold Brennan has made a study of another method that has proved its success over the years, and should be

ideal for our use. It is the standard and effective correspondence type of instruction, used so well in teaching all subjects from primary to professional. It has been developed by our Armed Forces for teaching the most complicated of courses, including Electronics. And the open examination used proves a knowledge of the subject, not just a trick memory.

I firmly believe that there is a strong desire for such advanced study in Dental Medicine and that it is the duty of the Academy to answer such a demand.

To care for the growing needs of the Academy, the following recommendations are offered:

1. An Educational Committee be appointed to investigate the need and desire for continuing education by Academy members; and to study the plan used by the Academy for General Practice in Medicine, to see if any part of it could be used by our Academy.
2. Have the President-Elect make the official visits to Sections. The knowledge of the Sections and members obtained in these visits would improve his effectiveness in his term as President.
3. Even closer relationships between the Academy and the Sections must be obtained. At the start of each Academy year, a mimeographed copy of standard Section By-laws and other rules and suggestions should be sent to each Section, to be followed up by a series of form letters entitled a "Plan for Procedure for Section Control", submitted several years ago by Past President George Bruns, and accepted by the Academy, but never carried out.
4. Invite Graduate Award Winners to a limited or Junior Membership in the Academy.

As we approach the 10th year of the Academy, we may well be pleased and proud of the results. But the more we do, the more there is to do. I am deeply appreciative of the splendid cooperation of all the officers and members, from the oldest to the newest. My special thanks for those who carried the largest share of the burden—the National officers, the Committee Chairmen, and the Sections officers. To the past National Officers and others who have aided me with kindly advice and suggestions I am sincerely grateful.

The Academy has, since its formation, been an important part of my professional life, and its growth and development has been the fulfillment of a private dream. Long may the Academy prosper. And may you, who have worked so well, prosper with it.

THE WORLD HEALTH ORGANIZATION*

JAMES E. PERKINS, M.D.†

At the Midwestern Conference on World Health, conducted by the National Citizens Committee for the World Health Organization in Chicago last June, I found myself in an informal discussion on the relative importance of communicable diseases in the world today.

One person said that he thought malaria was the most important communicable disease problem. I challenged that and said I thought that with the tremendous strides which had been made against malaria in many countries, tuberculosis was now the leading problem, even if one considered only the tropics. Another member of the group, an international authority on malaria and yellow fever, agreed with me. Still another, a dentist, said that although dental caries was not a communicable disease, it was one of the most important world health problems.

The point was then made by several that all these various health problems, which seem unrelated, actually are closely related. If the farmers in an area are all sick with malaria at harvest time, famine results. The lowered resistance of the starving population paves the way for more rapid spread of tuberculosis. Both malaria and tuberculosis result in lowered economic standards. Substandard housing and overcrowding follow and in turn contribute further to the development of tuberculosis. Extensive dental caries will result in malnutrition, which in turn may produce greater susceptibility to tuberculosis and other diseases.

The discussion went still further, pointing out that the substandard living conditions resulting in part from such diseases cause discontent, frustration, and desperation—fertile soil for the growth of communism.

The interrelationships between the various diseases as indicated above and their relationship in turn to standards of living and political ideology indicate why every citizen of the United States, particularly all those interested in preventive medicine, as are all members of the dental profession, should be informed concerning the World Health Organization, and give it enthusiastic support.

In spite of its extremely modest budget, the World Health Organization is exerting a remarkable influence in the improvement of the public health throughout the world, which in turn has great implications in reducing the chances of a hot war.

HISTORICAL DEVELOPMENT

The World Health Organization was not the the first official international organization in the public health field. Between the first and second world wars national governments initiated as part of the League of Nations a Health Organization as a first attempt to establish a central international public health organization. There was already in existence an international office of public hygiene in Paris, but this office was not related to an association of governments and concerned itself mainly with attempts to prevent spread of certain epidemic diseases and a limited intelligence service on the prevalence of a few contagious diseases in the cooperating countries. Even the activities of the new Health Organization of the League of Nations were quite restricted, and as part and parcel of the League itself, it was submerged and handicapped by the political considerations involved in the League proper. As the League lost prestige and influence, the health unit suffered accordingly.

But it was a start. It provided the most complete and authoritative epidemic intelligence thus far developed and conducted or stimulated numerous public health studies of great sig-

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† Managing Director, National Tuberculosis Association & Vice President, National Citizens Committee for the World Health Organization.

nificance.

With World War II, Americans found that isolationism was no longer possible and rather reluctantly they assumed a role of leadership in international affairs. The United Nations was established with the United States a member, in contrast with its failure to join the League of Nations, and provision was made for creation of specialized agencies which, although officially connected with the United Nations, enjoyed a certain degree of autonomy and were removed from many of the political aspects which had proved such a handicap to the old health office of the League of Nations.

One of the first specialized agencies to be established was the World Health Organization, replacing the League's Health Organization and the Paris office of hygiene. It was set up as an interim commission in 1946 and formally launched with the holding of the First Health Assembly in 1948.

Actually the interim commission had decided that the World Health Organization would formally come into existence when 26 nations had ratified the constitution of the WHO. The 26th nation did so on April 7, 1948, and for that reason, April 7th each year is celebrated as World Health Day.

NATURE OF WHO

The WHO, therefore, is an organization of national governments affiliated with but not an integral part of the United Nations. In other words, a country does not have to belong to the United Nations in order to be a member of the WHO. There are, in fact, many more countries which are members of the WHO than members of the United Nations—some 84 countries, in fact. A number of these countries have been prevented by Russia's veto from entering the United Nations.

The World Health Organization is interested in promoting health throughout the world, and as defined in the Constitution of the WHO, health means "a state of complete physical, mental and social well being, and not merely the absence of disease or infirmity." It also holds that health so defined is one of the fundamental rights of every human being, without distinction of race, religion, political belief, economic or social conditions.

FUNCTIONS

As to what the WHO does, let me mention a few experiences which I have had personally with WHO, which pretty well illustrate, I think, most of the types of service available from the WHO. The International Union Against Tuberculosis, which is a federation of national tuberculosis associations, has received very helpful advice and statistical information on the tuberculosis problem from the specialists in tuberculosis attached to the WHO headquarters in Geneva, Switzerland. Furthermore, WHO is represented at the annual conference conducted by the IUAT, which provides the Union with helpful guidance and information and also enables the Union to learn where it can be helpful in supporting the good work of the World Health Organization in the tuberculosis control field.

A service of great importance to tuberculosis workers throughout the entire world is research conducted by the WHO Tuberculosis Research office in Copenhagen, Denmark, under the direction of Dr. Carroll E. Palmer, of the U. S. Public Health Service, who devotes half his time to directing research studies in Copenhagen, and half time to the field research studies on tuberculosis in the U. S. Public Health Service. The research conducted through the Copenhagen office of WHO has been extremely helpful to tuberculosis workers in the United States in clarifying techniques and proper interpretation of the tuberculin skin test, which is rapidly becoming the most important epidemiological tool in tuberculosis work, as well as an increasingly valuable aid in differential diagnosis. Here is a good example of value received by the United States from its support of the WHO; we are often inclined to think that our financial support of the WHO is entirely a matter of providing assistance to other countries, rather than our getting anything back in return. Another example of our receiving assistance from the WHO is a conference which was held in Pittsburgh a year ago last fall called by Dr. Thomas A. Parran, Dean of the University of Pittsburgh

School of Public Health, and then director of a special survey of public health conditions in Alaska, conducted for the Department of the Interior. Dr. Parran wanted advice as to what should be recommended with regard to tuberculosis control procedures in Alaska, and the Director of the Tuberculosis program of the WHO was invited and attended, so as to give the rest of the group the benefit of his advice based upon his numerous observations in other areas of the world with situations similar to those existing in Alaska.

In New Delhi, India, I visited a laboratory which had recently been established to serve a large tuberculosis clinic. WHO, along with several other agencies, had assisted in making this laboratory possible. In Bangkok, Thailand, I visited a new laboratory which would produce BCG vaccine to be used in that country, and here again, WHO was one of several agencies which had made that vaccine production unit possible. In Manila I attended the First Pan Pacific Conference on Tuberculosis in 1953. The tuberculosis problem is particularly severe in southeast Asia and in the western Pacific area, and this was the first opportunity afforded the tuberculosis control officers of these various countries to get together to exchange experiences and to receive the latest information with regard to the scientific aspects of tuberculosis control. The Conference was only possible through the assistance of the regional office of the WHO located in Manila, and the providing of WHO traveling fellowships to these tuberculosis control officers to enable them to make the trip to Manila from their own countries.

In Germany and in other countries I have observed demonstration teams showing local physicians and public health workers how to perform the tuberculin test properly and how to give BCG vaccine to non-reactors. This program, which has been conducted throughout Europe. Asia, and Central and South America has been conducted under technical supervision of the WHO.

In countries girding the globe I have come across helpful posters, leaflets, and pamphlets on health aimed at informing the local people as to their public health problems and what they can do to help solve them. Some of the most valuable periodicals coming to my desk are those from the WHO, such as the WHO Bulletin, which gives the findings in the research programs and reports on the successes and failures of the various public health programs conducted in different parts of the world.

These, then are just some of the aspects of assistance from WHO which have come to my attention in the field of tuberculosis; namely, expert advice, training of local workers, assistance in establishing clinics and laboratories locally, the conducting of important research, the gathering and dissemination of important statistical information on disease, and health education of the public.

The instances which I have given, of course, have related for the most part to tuberculosis, and it must be kept in mind that workers in other specialized fields such as malaria, the venereal diseases, environmental sanitation, maternal and child health, and dental medicine, similarly have been the beneficiaries of assistance from WHO.

I should mention one or two additional services of the WHO which are important. Because of the speed with which man now can be transported from one country to another—and his infections with him—a world-wide system of prompt notification of the occurence of important communicable diseases and a set of internationally accepted sanitary regulations have become progressively more important.

Quoting from a WHO leaflet on its activities: "These regulations form a system of international health safeguards, which is designed to give the greatest protection to countries while permitting the widest freedom to travellers and the least possible number of delays to international freight transport. They came into force on October 1, 1952.

"The international warning system is a daily service sent out by a worldwide chain of radio transmitters. Cases of plague, cholera, smallpox or other dangerous epidemic diseases anywhere in the world are immediately reported to the Organization. Facts and figures, giving the place and extent of outbreaks, are at once put on the air and so the national health service of any

nation, as well as ships at sea and aircraft, are warned in time to take effective action.

"The necessity for drugs to be available in uniform strength anywhere in the world will be obvious. Today everyone who is given a dose of penicillin, every child who is protected by diphtheria vaccine, gets added safety because the dose is measured in *international* units. These measurements—which now apply to 50 preparations—have been worked out either by WHO or by its predecessors. Standards in preparation will bring the number up to 88."

WHO also has produced an international pharmacopeia, and its assembly has adopted internationl regulations on health statistics, so that morbidity and mortality data from the various countries are comparable. Without standardized nomenclature and procedures for designating diseases and causes of death, it is impossible to compare the health status of one country with that of another on the basis of morbidity and mortality statistics from the two countries.

ORGANIZATION AND ADMINISTRATION

As to the organization and administration of the WHO, the policy making body is the World Health Assembly, which is held once a year and is attended by the delegates of the various states members to decide on the WHO program for the following year and to determine its budget, as well as to adopt such international health regulations as may be necessary. Most of these assemblies have been held at headquarters in Geneva, although the Second World Health Assembly was held in Rome, and the Assembly this year is just now in session in Mexico City, the first time the Assembly has been held in the Western Hemisphere.

The assembly elects 18 countries to designate one member each to the executive board which functions essentially as an executive committee. This board meets twice a year.

WHO itself is staffed by a competent trained secretariat under the Director General, Dr. M. G. Candau of Brazil. Dr. Candau is the second Director General of WHO, and recently replaced Dr. Brook Chisholm of Canada in that capacity upon his retirement.

WHO is guided in the technical aspects of its work by a number of panels of experts.

Administration is decentralized through six regional offices; namely, European, African, Eastern Mediterranean, Southeast Asia, Western Pacific, and that of the Americas. In the case of the Americas, the Pan American Sanitary Bureau, which was already established before the WHO came into being, has been designated as the regional office for the Americas for the WHO, and its headquarters are in Washington, D. C. The member countries of each region meet regularly in committees to plan local programs, and to review the work of the regional office.

FINANCING

The budget of WHO is only about $9,000,000 per year, of which the United States pays about one-third. The congress of the USA has designated a maximum ceiling of annual contributions to the WHO, as well as to a number of other specialized agencies. That ceiling at the moment is $3,000,000, and will result in the United States' defaulting in its payment of its quota, unless the ceiling is raised by the current Congress. In other words, the budget adopted at the last World Health Assembly, calls for a contribution from the United States of $3,350,000,or $350,000 more than currently allowed. I feel certain that Congress will raise this ceiling, and President Eisenhower, in his health message to Congress this year, recommended that it be raised from $3,000,000 to $5,000,000.

Thus, you will see, that the total budget for the whole WHO is only a fraction of the budget for the health department of this City of New York, and is trivial compared with the billions of dollars which have been poured into the Foreign Operations Administration program. I sincerely know of no program which is producing greater dividends and has greater potentialities for the good of the United States and for the good of the entire world than the WHO, and I presume at this point I should not miss the opportunity to point out that if you wish to assist individually you are most welcome to take out a membership in the National Citizens Committee for the WHO, which has its headquarters at 1790 Broadway, New York 19, N. Y.

RELATION TO ILO

I should like to conclude by putting up one or two questions which I find arise frequently in discussions throughout the country on the WHO, and which may have arisen in your minds. One question is the following: Are ILO (International Labor Organization) and WHO essentially the same thing, and are they both working toward the goal of forcing socialized medicine on the citizens of all countries?

The answer is that these are completely separate agencies, although they both happen to be specialized agencies of the United Nations. It is true that just as organized labor in this country makes no bones about its support of compulsory health insurance, the ILO, which officially represents the thinking of labor groups in various countries, indicates a similar point of view. However, the WHO has not taken any such stand, and I do not believe it will. One thing did happen several years ago which apparently is the basis for suspicion and unwarranted statements to the effect that WHO is promoting socialized medicine.

In June 1951, ILO invited WHO to advise it on the formulation of the medical and health aspects of a proposed convention (that is, treaty) on "Minimum Standards of Social Security." Since it is the rightful policy of WHO to cooperate with other international agencies on health matters, the WHO Executive Board (8th session) approved the establishment of a WHO *ad hoc* consultant group to advise ILO in this matter. This group met for two days in December 1951. It was composed of physicians from six countries but the American member, Dr. Henry E. Sigerist, although a noted medical historian who now lives in Switzerland, could scarcely be called representative of the thinking of the U.S. medical profession on questions such as health insurance. The consultant group produced a report which was very sympathetic to government medical care programs and which, for example, urged that "as an ultimate goal, complete unification of the administration of medical care and preventive services be developed." This report was considered by the Ninth Executive Board in January, 1952, and it was obvious to the Board that the report presented mainly one viewpoint and certainly could not be endorsed as representing the position of WHO. The Board, therefore, merely noted the report and approved its transmission to the ILO with the explanation that the opinions expressed therein were not necessarily those of members of the Board and should not be taken as an expression of policy by WHO.

So far as I can determine, there is no evidence that the Report of the Consultant Group was presented at the International Labor Conference of 1952 as representing the approved recommendations of WHO.

The mimeographed minutes of the Committee on Social Security of the 1952 International Labor Conference indicate that Dr. Maystre as representative of the World Medical Association made a statement to the Committee in which he pointed out that the recommendations of the Consultant Group "were contrary to the opinions of the vast majority of the medical profession." Dr. Maystre also brought to the attention of the Committee the principles of social security adopted by the World Medical Association at its 1948 meeting.

The above incident has unfortunate aspects, but it cannot legitimately be used as basis for a charge that WHO is promoting "socialized medicine." A legitimate criticism would be that the WHO Director General did not realize until too late that the composition of the Consultant Group was not adequately representative. In any case this incident is past history and in no way indicative of WHO activities, which are showing dramatic results in promoting genuine public health programs throughout the world.

AUTOMATIC REGULATIONS

Another question which has come up frequently is whether or not the World Health Assembly can adopt a treaty (which technically is called a "convention") or regulations which automatically will come into effect in this country and thus might have the potentiality of forcing socialized medicine or some other unwelcome practice on the citizens of the United States without their having an opportunity to reject any such proposal.

This was considered very carefully at the first annual meeting of the National Citizens Com-

mittee for the World Health Organization held here in New York on November 9, 1953. At that meeting the question "Can WHO force certain public health programs on the American people" was put specifically to Dr. H. van Zile Hyde, Director of International Affairs of the United States Public Health Service and the State Department, and the representative of the United States of America on the Executive Board of WHO. Let me quote excerpts from his reply:

"I think we might say at the beginning that the answer to the question is an unequivocal 'No'.

"It seems a little strange that such a question should even be asked. It is ridiculous to think that WHO might be able to force a program on 160,000,000 Americans.

". . . let us look at the WHO constitution which establishes these authorities and places about them certain safeguards. Articles 19 and 20 deal with conventions and agreements. (The word 'convention' is synonomous with 'treaty'.)

Article 19 reads as follows:

> The Health Assembly shall have authority to adopt conventions or agreements with respect to any matter within the competence of the Organization. A two-thirds vote of the Health Assembly shall be required for the adoption of such conventions or agreements, which shall come into force for each Member when accepted by it in accordance with its constitutional processes.

It should be noted that the 'authority to adopt' gives no force to any conventions or agreements that might be adopted. Article 19 makes clear that despite adoption by 'two-thirds vote of the Health Assembly', such conventions and agreements come into force for any member state *only* when accepted by that state 'in accordance with its constitutional processes.'

"Article 20 constitutes only an assurance that Member governments will treat any such recommendations made by the WHO with the attention and regard due an international body of the dignity of WHO.

"*Article* 20 reads as follows:

> Each Member undertakes that it will, within eighteen months after the adoption by the Health Assembly of a convention or agreement, take action relative to the acceptance of such convention or agreement. Each Member shall notify the Director-General of the action taken, and if it does not accept such convention or agreement within the time limit, it will furnish a statement of the reasons for non-acceptance. In case of acceptance, each Member agrees to make an annual report to the Director-General in accordance with Chapter XIV.

One notes in this Article the tacit assumption that some governments will not accept the recommendations. (There is almost a plaintive note in the Article.)

"There is nothing in these two Articles that puts the WHO in a position to force any program on the American people. Positive action by the government of the United States is required in order to give any effect, insofar as the United States is concerned, to conventions and agreements adopted by the WHO. The only duty laid upon the United States is to take some action with respect to the convention or agreement, and report what action it takes, with a statement of its reasons if it does not wish to accept. I might add for the record that WHO has as yet made no such recommendation and has, as far as I know, none under consideration.

"We come then to the question of regulations. Many of you know that WHO has exercised its authority in this field: WHO Regulation #1 dealing with the standard classification for statistical purposes of causes of morbidity and death, WHO Regulations #2 dealing with international sanitary matters—replacing 'trunks full' of obsolete, international conventions.

"The Articles of the WHO Constitution which treat of these matters are Articles 21 and 22 and they should be read together. They are as follows:

Article 21:

> The Health Assembly shall have authority to adopt regulations concerning:
>
> a) sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease;
>
> b) nomenclatures with respect to diseases,

causes of death and public health practices;

c) standards with respect to diagnostic procedures for international use;

d) standards with respect to the safety, purity and potency of biological pharmaceutical and similar products moving in international commerce;

e) advertising and labelling of biological, pharmaceutical and similar products moving in international commerce.

Article 22:

Regulations adopted pursuant to Article 21 shall come into force for all Members after due notice has been given of their adoption by the Health Assembly except for such Members as may notify the Director-General of rejection or reservations within the period stated in the notice.

"Historically, these Articles grew out of the chaotic situation in regard to international sanitary conventions. In 1946, when the Constitution of the WHO was drawn up, the United States was bound to other governments in the matter of sanitary procedures—i.e., vaccination certificates, bills of health, deratification certificates, etc., etc.—under a series of conventions drawn up between 1903 and 1944. Although we kept generally up to date in scrapping the old and undertaking the new, many governments did not. We were therefore in the strange position of having a formal agreement, of treaty force, with certain governments under the terms of the 1912 conventions, and with other governments, covering exactly the same problems under agreements made in 1928 and 1944.

"As we struggled to keep procedures up to date, it was necessary to call special international conferences for these purposes at which there would be adopetd new procedures on the basis of the latest technical knowledge, and these conferences were not called until the situation was pretty bad. Each of these revised procedures then had to be submitted to the Senate for ratification. Senator Vandenburg, indeed, requested that some way be found to avoid the necessity for the Senate, as he put it, 'to ratify scientific advance'. The system of international regulations contained in Articles 21 and 22 was the answer to this problem.

"Can the WHO through these Articles force a health program on the American people? The answer is, 'No'!

"Article 22 contains a complete safeguard. The only conceivable danger is the preposterous one that the United States Government, after participating in Health Assembly discussions and after being duly notified of an action of which it is already fully aware by such participation, might not take the action it is fully empowered to take in saying, when appropriate, 'nothing doing as far as the U.S. is concerned'!

"At the International Health Conference in 1946, here in New York City, a member of a delegation from one of the smaller European States hammered away at this danger. Finally, the Observer from Ireland stalked to the podium and, pointing out all the opportunities given a government to know fully what was proposed, stated impatiently that, 'No government should have so much inertia that it doesn't wake up at least once a year'!

"I can assure you that the United States Government is awake at all times in these matters.

"If there is any lingering doubt about this, I would point out that the Eightieth Congress in enacting the Joint Resolution accepting the Constitution of the WHO, in 1948, included in its Resolution the following provision:

> In adopting this joint resolution, the Congress does so with the understanding that nothing in the Constitution of the World Health Organization in any manner commits the United States to enact any specific legislative program regarding any matters referred to in said Constitution."

At that same annual meeting the internationally known expert in the field of environmental sanitation, Dr. Abel Wolman of Johns Hopkins University, had this to say:

"Dr. van Zile Hyde, as is always the case, can be summarized with great brevity because he talks succintly and clearly and to the point. He was asked the question: Can WHO force certain public health programs on the American people? If I had a mind to, I could summarize it very briefly as he did. The answer is 'No'!

"He particularlized; he gave examples; he referred to that eternal conjuring up of the sanitary convention spectre which I have heard in various parts of our country used as an example of what WHO can impose upon the United States. Those of you who heard him cannot, I think, escape the conclusion that there is nothing in the Constitution of WHO that can, even in theory, superimpose a dictum, a convention, a policy, a procedure, not only on the United States, but on any other country in the world. If you have not formed that conclusion from his quotations, I think they should be re-read. They are, to my mind, simple, clear and easily understood. I know they were simple, clear and easily understood to the people who drafted the WHO Constitution."

I apologize for spending so much time on this particular phase, but as Dr. Wolman has indicated, one constantly runs into these questions in different parts of the country and encounters incorrect statements along these lines by prominent individuals who should be better informed.

CONCLUSION

The program of the World Health Oroganization is such that it should have the enthusiastic and warm backing of every citizen in the United States of America, in my opinion, and particularly every member of the medical and dental professions. By laying these ghosts once and for all I trust that such support henceforth will be actively forthcoming. Such support is meritted not only because of altruistic motives in lessening misery and suffering elsewhere in the world, but also from the purely selfish motives of helping the United States of America do a better job in protecting and promoting the health of its own citizens, and in reducing the likelihood of a disasterous nuclear weapon war resulting from future extension of communism into freedom loving but illness-ridden, poverty stricken countries which are still outside the iron and bamboo curtains.

NATIONAL TUBERCULOSIS ASSOCIATION,
1790 Broadway, New York, N. Y.

LE ORGANISATION MUNDIAL DE SANITATE

Dr. med. James E. Perkins

SUMMARIO IN INTERLINGUA

In despecto de su modestissime budget, le Organisation Mundial de Sanitate exerce un remarcabile influentia super le melioration del sanitate public in omne partes del mundo, lo que—de su parte— ha importante consequentias in reducer le probabilitates de un guerra "a armas calide."

Le Organisation Mundial de Sanitate non es le prime organisation official international in le campo del sanitate public. Inter le prime e le secunde guerra mundial, governamentos national initiava intra le Liga del Nationes un Organisation de Sanitate como un prime tentativa a establir un central organisation international de sanitate public.

Per le Secunde Guerra Mundial le americanos se trovava convincite que lor previe isolationismo esseva non plus possible, e satis hesitantemente illes acceptava un rolo de leader in affaceres international. Le Nationes Unite esseva establite con le Statos Unite inter le membros—in contrasto con le Liga del Nationes a que le Statos Unite nunquam adheriva—e planos esseva elaborate pro le creation de agentias specialisate, le quales—ben que officialmente affiliate con le Nationes Unite—possedeva un certe grado de autonomia e poteva tener se distante ab le multe complicationes politic que habeva essite un si grande obstaculo pro le bureau de sanitate del Liga del Nationes.

Un del prime agentias specialisate que esseva establite esseva le Organisation Mundial de Sanitate que reimplaciava le Organisation de Sanitate del Liga e su bureau de hygiene a Paris. Le nove organisation esseva establite sub le forma de un commission interime in 1946 e commenciava su activitates officialmente con le Prime Assemblea de Sanitate in 1948.

De facto le commission interime habeva decidite que le Organisation Mundial de Sanitate comenciarea su existentia formalmente post le ratification de su constitution per 26 nationes. Le vinti-sexte nation completava le ratification le 7 de april 1948, e pro iste ration le 7 de april es celebrate annualmente como le Die Mundial de Sanitate.

Le Organisation Mundial de Sanitate es consequentemente un organisation de governamentos national, affiliate con le Nationes Unite sin devenir un parte integrante de illos. In altere parolas, un pais non debe esser membro del Nationes Unite pro adherer al Organisation Mundial de Sanitate. De facto, le numero del membros del Organisation Mundial de Sanitate es multo plus grande que le numero del membros del Nationes Unite: 84 nationes adhere al Organisation Mundial de Sanitate. Un certe numero de istos non es membros del Nationes Unite a causa del veto de Russia.

Le Organisation Mundial de Sanitate es interessate a promover le sanitate public in omne partes del mundo. Secundo su constitution le termino "sanitate" significa "un stato de complete ben-esser physic, mental, a social e non solmente le absentia de maladia e infirmitate." Le Organisation etiam mantene que sanitate, in iste definition, es un del derectos fundamental de omne humano, sin distinction de racia, religion, affiliation politic, e stato economic o social.

AMERICAN ACADEMY OF DENTAL MEDICINE MID-WINTER MEETING

The Mid-Winter meeting of the American Academy of Dental Medicine will be held on Sunday, December 4, 1955 at the New Yorker Hotel in New York City.

The general theme of the meeting will be "The Oral Soft Tissues in Health and Disease". Three excellent speakers will discuss various aspects of this interesting subject. Dr. Lester Burket will speak on "Tongue Lesions", and Dr. Hamilton Robinson will discuss "Deficiency Diseases". Dr. Edward V. Zegarelli will lecture on "Allergic and Idiosyncratic Lesions of the Oral Soft Tissues". The three essayists will illustrate their talks with Kodachrome slides.

There will be a business meeting for members of the Academy at 10:00 A.M. followed by a luncheon. Plan now to attend the Mid-Winter meeting.

DR. ALONZO DEVANNA, *Chairman*
DR. NORMAN ALDERMAN, *Co-Chairman*

IMPLANTATION: PRINCIPLES, PRACTICES AND PREDICTIONS*†

STANLEY J. BEHRMAN, B.A., D.D.S.**

The implantation of non-viable substances into the human body for therapeutic reasons is not new. In 1565 Petronious utilized a permanent gold plate for the repair of a palatal defect.[1] In 1775, Lapeyode and Sicre[1] placed metal wire about a fracture. Von Langenback,[2] in 1840, inserted a metal nail into a fractured hip. Lister[2] reported the successful wiring of a patella in 1883. Frost,[3] in 1886, used the first orbital implant. In rapid succession were developed steel plates for fractures, metal buttons for intestinal sutures, steel screws, and magnesium tubes for arterial anastamosis. During the fifty years of this century surgeons have developed a wide variety of substances which are implanted within body tissues for varied purposes. Today, in any large general hospital the operating room probably will have on hand metal joints, plates, screens, screws, nails, pins, wires, tubes, buttons and balls as well as plastic balls, tubes, strips, sponges, joints and valves. The general surgeon, or his colleagues in their surgical specialties, place these non-viable materials across fracture sites and into bone, in the chest cavity and in the orbital cavity, use them to replace ureters, portions of the aorta, defective joints and inefficient heart valves.

PRINCIPLES

The success of implantation is contingent upon adherence to several surgical principles. These have been evolved through animal experiments, clinical experience and the trial and error efforts of innumerable investigators. The two fundamental principles of implantation are:

1. The implant must be of a tissue tolerated material.
2. The implant must be *completely covered* by tissue.

The necessity for an implant to be composed of a tissue-tolerated material is obvious. A non-tolerable substance produces a foreign body reaction leading to tissue break-down and extrusion. Only because of the development of so many tissue-tolerated materials, each with other important secondary characteristics, has the technic of implantation been able to be extended to such a degree.

In view of the recently developed semi-buried subperiosteal dental implants, the essentiality of complete coverage may not seem important to the dentist. To the general surgeon,[4] orthopedic surgeon,[5] and ophthalmalogic surgeon,[6] it is an *a priori* fact that every implant must be completely buried within the tissues. It is as fundamental as the doctrine, "you do not sew-up an abscess."[5] A relatively few years ago ophthalmologic surgeons attempted to controvert this principle. A review of their experience is worthwhile in evaluating dental implants.

When an eye is enucleated, a metal or plastic implant generally is placed in the orbital cavity. This prevents the adjacent soft tissues from collapsing into the orbital cavity. The implant is completely covered by suturing soft tissue (Tenon's capsule and conjunctiva) over it. After healing, a glass or plastic prosthetic shell, colored to resemble the viable eye, is placed beneath the lids. This has been the practice since it was introduced by Frost in 1886.[3] The early use of non-tolerated substances, like glass and ivory, resulted in a high rate of extrusion. The development of highly tissue-tolerated materials such as methyl methacrylate[7, 8, 9] and Vitallium[10] reduced the extrusion rate to a minimum, but, "accepted methods must [still] be used . . . 1) complete coverage of the implant and 2) coverage without tension."[11]

These completely buried implants, though they do not extrude, still leave unsolved another fundamental problem. This is the lack of motion of the artificial eye. The cosmetic

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* From the Department of Surgery, The New York Hospital-Cornell Medical Center.

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prosthetic eye may be indistinguishable from the viable one while the wearer looks straight ahead, but when the natural eye moves from side to side or up and down, the artificial eye remains static. The development of antibiotics encouraged ophthalmologists to attempt to solve this problem in a manner that circumvented the principle of complete coverage of implants. In 1946, Ruedemann[12] reported the first use of an exposed integrated eye implant. This was a one-unit implant and cosmetic prosthesis to which the extrinsic muscles of the eye were sutured. Since the muscles of both orbits function in unison, as the viable eye moved in its socket, the corresponding muscles moved the implant in the other socket. Rapid development of a large number of exposed integrated implants of various designs ensued.[13, 14, 15, 16] Basically, these each consisted of a spherical implant to which the orbital muscles were sewn and which was completely covered by soft tissue except for one area in the front center. Through this area a peg projected. The cosmetic prosthesis placed beneath the lids was integrated to this peg by a receptacle. (The similarity to the semi-buried sub-periosteal dental implants can be seen readily.) (Fig. 1). When the viable eye moved the implant moved; this motion was transferred by the peg to the prosthesis so that the artificial eye moved correspondingly.

In most instances the initial results with these implants were excellent and the reports were enthusiastic. However, within a few years the reports were decidely different. Kennedy and Shipman[17] reported that thirty-seven per cent of their exposed implants had extruded within two years of insertion. Cutler[18] reported a fifty per cent loss within two and one-half years, and Ruedemann,[19] the originator of this method, reported that *all* of his implants had extruded within seven years. Almost all users were agreed that exposed implants, "Controvert the basic surgical dictum that a wound must be completely epithelized [closed] in order not to break down. When an analogous procedure has been attempted in the past by . . . orthopedic surgeons, no matter how small their unepithelized pin might be, sloughing has invariably ensued."[20]

Additional attempts were made to circumvent complete coverage of the implant. Moore[21] buried his implant fully and then, ten weeks later, inserted an exposed Vitallium screw. (Ogus[22] wrote of the same technic with a denture implant.) McDowell[23] tried to create a

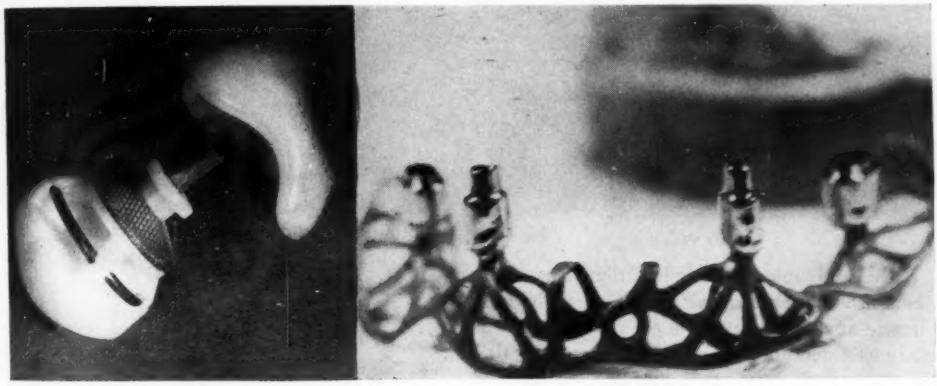

Fig. 1A Fig. 1B

Figure. 1 A. Semi-buried exposed orbital implant.
B. Semi-buried exposed dental implant.
(*Courtesy Dr. Isiah Lew*)
In both these implants the posts protrude through the tissues.

skin-lined tunnel in the socket which would receive a removable semi-circular band with a slot to integrate the prosthesis. (Skinner and Robinson[24] reported an analogous procedure to retain dentures by tunnels through the alveolar bone.) However, most authorities were soon agreed that, ". . . it seemed inadvisable to continue using an implant which required an opening to be left through the conjunctiva."[25] They soon, ". . . switched over to the [completely] buried types."[26] Today almost without exception, ophthalmologic surgeons use implants which adhere to the basic principle of complete coverage.

There are two other long-established principles of implantation which affect the success or failure of dental implants. These are:

3. Bone-bearing implants must be immobile.
4. The implant must not interfere with the physiology of the adjacent tissue.

Directly related to the third principle are two dicta:[27]

a. Bone resorption is directly proportionate to implant mobility.
b. Mobility, tolerance and bulk are interrelated.

PRACTICES

The principles of implantation have been established for many years, considerably long before any work was done on sub-periosteal or magnetic denture implants. It is interesting that within recent years two methods of denture retaining implants have been developed. The semi-buried exposed sub-periosteal implant method, which controverts first one and then another of these principles, and the Behrman-Egan Magnetic Implant method,[28] which adheres to all the principles.

1. *Semi-buried implant*

The semi-buried sub-periosteal implant is the contribution in this country of Goldberg and Gershkoff.[29] Their technic consists of implanting beneath the oral mucoperiosteum overlying the mandible an individually cast meshwork of Vitallium. The soft tissues are then sutured over the meshwork except for four posts which are permitted to protrude into the oral cavity. These four posts support a specially constructed denture.

This technic has been attempted by many practitioners and a number of modifications made. The most significant of these is the taking of a direct impression of the bone on which the implant is to lie.[22] There have been other slight changes in the hands of Berman,[30, 31, 32] Lew,[33] Bodine and Kotch[34] and others. All these changes have been made to overcome shortcomings inherent in this technique; shortcomings which are directly related to the failure to adhere to the basic principles of implantation. It should be stated that for the period of time that these sub-periosteal implants are firm they provide retention, stability and masticatory efficiency unequaled by any other technic. Unfortunately, it is this high degree of masticatory efficiency that probably plays a significant part in the undoing of these implants.

2. *Completely-buried implant*

The Behrman-Egan Magnetic Implant is completely buried within the tissues. It is entirely covered by tissue and adheres to all the principles of implantation. It is similar in properties to every other successful implant placed anywhere in the human body. As developed at The New York Hospital—Cornell Medical Center, this Magnetic Implant:

a. Is of tissue-tolerated materials.
b. Is completely covered by tissue.
c. Becomes firmly imbedded in the bone.
d. Does not interfere with the physiology of the adjacent tissues.

The Behrman-Egan implant technic basically involves the implantation in the jaw of tiny powerful magnets and the imbedding in a conventional denture of similar magnets. The force of attraction between the magnets in the jaw and the magnets in the denture helps retain the denture in place. The magnets are composed of a cobalt-platinum alloy. They are the most powerful magnets for their size existent. Under ordinary stresses the magnetic force or flux will remain constant for the lifetime of the user. Only lethal high voltage or extremes of temperature, well beyond human endurance, can demagnetize this alloy. The units themselves meas-

ure ¼ inch in length, a little more than ⅛ inch in width and less then ⅛ inch in height. They resemble slightly flattened cylinders which are flat at both ends as well as topside and bottom side. Unlike most magnets which are magnetized along their length, these units are magnetized through the diameter. This produces an entire flat top surface of one polarity and an entire bottom surface of another polarity. The specific size, shape and direction of magnetization are calculated to provide the maximum amount of energy in the smallest mass usuable for this purpose. (Figure 2A).

in the jaw are coated with polytetrafluorethylene. This plastic has been shown to be one of the most tissue-tolerated of all substances.[35] It is sprayed and baked onto the magnets seven times yet its total thickness is only two thousandths of an inch (0.002). Each implant is checked with electrodes to make certain that there are no microscopic flaws in the covering. Attached to the top of the implant magnet, by being incorporated in the plastic coating, is a fine meshwork of tantalum. This extends beyond the edges of the magnet for a few millimeters. Tantalum is an element and is one of the most tissue-

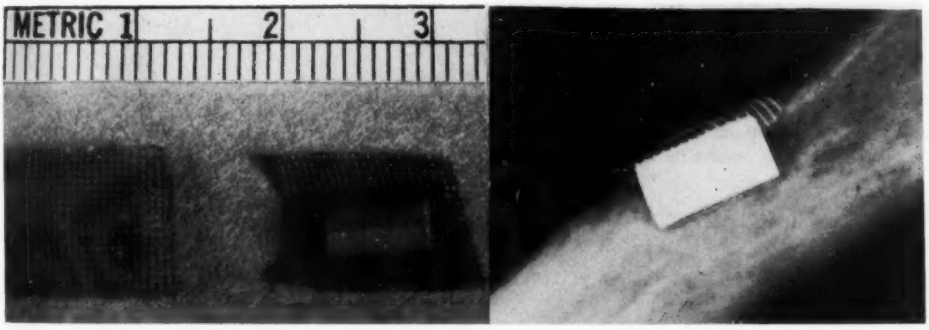

Fig. 2A Fig. 2B

Figure 2. A. Behrman-Egan Magnetic Implant. (*Left*, from above; *right*, from below).
B. Behrman-Egan Magnetic Implant immediately after insertion.
(At insertion the tantalum mesh is trimmed to a millimeter or two beyond the magnet.)

Magnetism itself has no effect whatsoever on tissue. Magnetism does not consist of rays, waves, electron exchange, or any other explicable phenomenon. There is no electric energy involved and no current induced. The magnetic force, whatever it is, passes unimpeded through bone and soft tissue alike as well as through plastic and metal. In fact, there is no known substance that can stop magnetism. Individuals who have worked with massive magnets all their lives have never shown any deleterious effect attributable to magnetism. It is completely harmless and perfectly safe.

Preliminary animal experiments indicate that the cobalt-platinum alloy itself is extremely well tolerated by the tissues. However, as a precautionary measure, the magnets to be implanted

tolerated of all metals. In practice, when the implant magnet is placed in the jaw, the meshwork is trimmed so that just a millimeter or two overlie the edges of the bony vault. This keeps the top of the magnet flush with the level of the bone. It also serves to prevent the magnet from turning to follow the steel needle used to suture the tissue over it. (Figure 2B).

Both the surgical and prosthetic technics involved are relatively uncomplicated from the viewpoints of the dentist and the patient. The surgical technic involves the preparation in the mandibular bone of a "vault" corresponding in size to the implant magnet: (¼" x ⅛" x ⅛"). Under sterile precautions, an incision is made, along what would be the crest of the ridge were it not absorbed, in the bicuspid-molar area.

The mucoperiosteum is reflected and held with retracting sutures, care being taken to make certain that both the periosteum *and* the mucosa are held by these sutures, as the periosteum has a tendency to retract away. A sterile denture magnet (soaked for eighteen hours in benzalkonium chloride) is then placed along the exposed bone as a guide for the selection of the surgically optimum site for implantation. At this point, using burs and diamond stones under a steady stream of sterile saline, the vault is prepared in the bone. The denture magnet is used as a template; when it goes to place easily, the implant magnet is positioned. The meshwork is trimmed so that it barely overlies the edges of the vault. Aided by the retracting sutures, the mucoperiosteum is sutured completely over the implant. This procedure should take about twenty minutes on each side of the arch. It is actually no more traumatic to the patient than the removal of a tooth; the bulk of the time is consumed in careful retraction and suturing. The patient is maintained on prophylactic antibiotic therapy.[35A] The old unsatisfactory dentures may be worn immediately.

One month after completion of the surgical procedure a conventional lower denture is made. The technics and materials which the individual practitioner has found best may be used. The only modification made in denture construction is that the posterior buccal flange is constructed of clear acrylic resin. When the dentures are completed the denture magnets are placed in the mouth. They will align themselves properly over the magnets already implanted in the jaw. An indelible pencil is used to mark on the buccal mucosa the mesial and distal extensions of the denture magnets. The magnets are taken out of the mouth, the denture inserted and these markings transferred to the denture. The denture is removed and "windows" are cut through the clear buccal flanges between the transferred markings. These windows should be a good bit larger than the denture magnets themselves. The denture is then seated in the mouth and the denture magnets are placed in each window. They should be permitted to align themselves as before without their touching any portion of the denture. If they touch the denture in any area, additional acrylic should be removed. When the magnets are self-aligned and are free of the denture, the patient is instructed to close in centric occlusion. In this position self-curing acrylic polymer is insufflated about the denture magnet. This is followed by a few drops of liquid monomer. Within several minutes the resin has set and the denture is removed. Additional plastic may be placed in any defects to provide a smooth finish. The entire prosthetic procedure should take ten or fifteen minutes.

This method of aiding full denture retention is indicated for full lower denture wearers who,

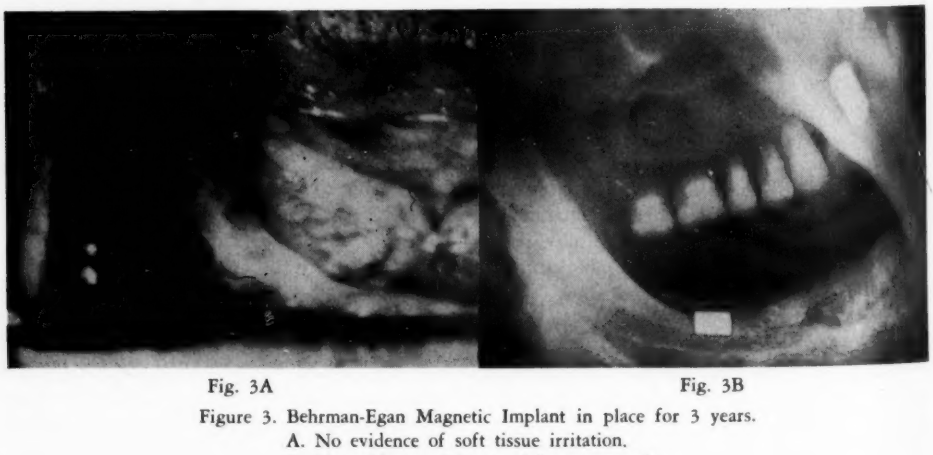

Fig. 3A Fig. 3B

Figure 3. Behrman-Egan Magnetic Implant in place for 3 years.
A. No evidence of soft tissue irritation.
B. No evidence of hastened bone resorption.

because of the anatomical configuration of the jaw, cannot successfully retain a purely conventional lower denture. The patient who psychologically cannot wear *any* full denture may not be aided materially by this technic. A patient who ordinarily can barely open his mouth without his denture raising, may find with this method that he can open wide, stick out his tongue, touch his palate and perform other oral gyrations without unseating his denture. Mastication may become as efficient as that of any patient wearing a full lower denture. Of course, the psychological "lift" of knowing the denture will not lift is of inestimable value.

have to be expended consists of occasional repositioning of the denture magnets or relining of the denture as the years progress. This is done in the conventional manner; the magnets may be cut out and replaced in the denture with ease. Patients have had completely buried surgical implants in their bodies for tens of years. There is no reason why these completely buried implant magnets will not be tolerated for similar lengthy periods of time.

The prognosis for the semi-buried exposed sub-periosteal implants may not be as bright. It is a fact that in every specialty of surgery, every type of exposed implant has failed. For

Fig. 4A Fig. 4B

Figure 4. Resorption of mandible under semi-buried exposed implant.
A. Immediately after insertion.
B. Two years after insertion.
The position of the circumferential wire clearly shows the amount of bone resorption.
(*Courtesy Dr. Nicholas Berman*)

PREDICTIONS

Patients have been wearing Behrman-Egan Magnetic Implants for over three years. Constant clinical, roentgenographic and microscopic examination has failed to reveal any deleterious effect whatsoever. There has been no irritation of the mucosa, no hastened resorption of the bone, (Fig. 3) and no microscopic evidence of lack of tissue toleration. In fact, the implants are so well tolerated that bone actually grows over the rounded sides of the implants holding them in position. The only care which may

these stress-bearing exposed denture implants to be successful in the oral environment there should be extremely extenuating conditions. It is questionable whether these exist. The semi-buried implants controvert first one, and then two, of the principles of implantation. The first is that they are not completely covered by tissue. There exists today no known non-viable substance to which tissue will attach itself. Every investigator of every tissue-tolerated implant material, whether completely buried or not, has found nothing better than a dense fibrous capsule about the implant.[36,37,38] No one has ever

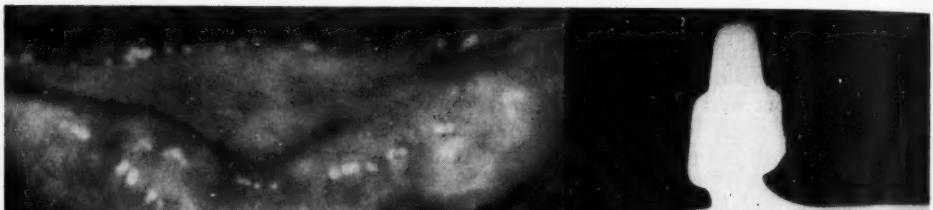

Fig. 5A Fig. 5B

Figure 5. Extrusion of semi-buried exposed implant after two years.

A. Metal framework exposed; soft tissue irritation about the posts; *center*, deposits of calculus on the exposed metal.

B. Roentgenogram showing bone resorption under the implant.

(*Courtesy Dr. George Trattner*).

been able to demonstrate tissue attachment to any exposed implant. Berman's[39] most recent attempt to achieve attachment to the exposed posts by using polyvinyl sponge fused to the posts, resulted in failure.

Even if the problem of exposure were overcome, there still remains the violation of another important principle: *bone-bearing implants must be immobile*. In 1929 it was pointed out that, "Mobility of the metal plays a capital role in bone resorption."[27] The first big improvement in the Goldberg-Gershkoff method came with the development of the direct impression technic. This eliminates guesswork and enables the initial implant to fit the bone accurately. As with all implants, a thickness of soft tissue soon grows between the implant and the bone. While some will construe this as a "cushion," others will interpret it as an interference with the original precise adaptation to the bone. Further, all mandibles physiologically change shape with the passage of time. No metal implant can change its shape correspondingly. Even were there no other factors to hasten the process, in time, the most accurate-fitting casting would be ill-fitting. And a poor-fit leads to mobility, and mobility produces resorption of bone. But there are other factors which hasten this process. The dentures fixed to the exposed posts of these sub-periosteal implants are subject to great masticatory stresses. These stresses are transmitted directly to the underlying metal framework and then to the tissues upon which the framework bears. A prime proponent of exposed implants points out that, "These masticatory pressure forces seem to exceed the physiological tolerance of the bone, since the forces are concentrated on a relatively small area. The result of this is atrophy of the bone."[39] (Fig. 4) As the bone atrophies and resorbs because of these stresses, it changes shape. The metal framework cannot adjust itself accordingly. More and more soft tissue may attempt to fill in the discrepancies. Or, what often happens, more and more of the implant becomes exposed. (Fig. 5) There is then less firm tissue supporting the framework and its mobility increases. So the cycle of bone resorption, mobility and increased bone resorption goes on. Enlarging the bone-bearing area of the implant may serve to slow down this cycle somewhat. It is important to remember also that, "mobility and tolerance and bulk are interrelated [and] a large immobile mass is better tolerated than a small mobile mass."[27] But a large mobile mass will be least tolerated

of all. The passage of time should see an increasing number of extrusions of semi-buried sub-periosteal implants.

The prognosis for exposed implants would seem to be best in the mouths of patients with atrophied muscles of mastication. This would mean that less stress would be placed upon the implant and less consequent bone resorption would ensue. It seems likely, however, that many of these patients would do as well with Behrman-Egan Magnetic Implants which require less formidable surgery and an infinitely simpler prosthetic technic; and which should, from all indications, produce no pathological bone resorption and should last indefinitely.

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IMPLANTATION: PRINCIPIOS, PRACTICAS, E PREDICTIONES

Dr. chir. dent. Stanley J. Behrman (B.A.)

SUMMARIO IN INTERLINGUA

Le problema del laxe e mal-adjustate dentatura complete inferior es un cosa del plus intime experientia pro milliones de personas. Mesmo le melior technica dental es inadequate pro certe patientes qui simplemente a causa del configuration anatomic de lor maxillas non pote retener un dentatura complete inferior. Pro iste patientes un nove technica ha essite disveloppate. Iste technica es unic in le campo del dentisteria, sed illo incorpora notiones que ha essite amplemente verificate in altere disciplinas medical. Nos parla del implantation in le maxilla de parvissime sed fortissime magnetes correspondente a simile magnetes includite in le dentatura con le resultato que le attraction mutual del magnetes in le maxilla e in le dentatura es de adjuta in mantener le dentatura in position.

In contrasto con omne altere typo de implanta dental, iste magnetes es completemente inhumate in le texitos; illos es completemente coperite per texito.

In omne branca medical—sin ulle exception—omne typo de implantation tentate a bon successo ha laborate con implantas completemente coperite per texito. In omne branca medical—sin ulle exception—omne typo de implanta partialmente exponite ha resultate in fallimento. Iste factos ha ducite al formulation e al acceptation solemne de duo principios principal in re le problema del implantation: (1) Le implanta debe esser facite de un materia tolerate per le texito. (2) Le implanta debe esser completemente coperite.

Le implanta del typo Behrman-Egan es le unic implanta dental que es conforme a iste principios. Omne altere typos de implantas dental es semi-inhumate e semi-exponite. Proque il non existe ulle cognoscite substantia de confection artificial a que le texitos del corpore pote attachar se, omne semi-inhumate implanta—non importa si su portion exponite al bucca es granda o parvissime—pote esser considerate in un certe senso como integremente exponite. Le experientia medical ha demonstrate que completemente coperite implantas in qualcunque parte del corpore—providite que illos consiste de materiales tolerate per le texito—va succeder, e inversemente que implantas exponite debe faller. Il existe nulle ration pro supponer que iste constatationes non es ver pro le maxilla e le cavitate oral.

Nostre experientias ha demonstrate que un large portion de iste hypothese non es un hypothese sed un facto. Implantas del typo Behrman-Egan se ha mantenite in position con bon successo durante plus que 3 annos. Continue observationes, roentgenogrammas, e examines microscopic del texitos ha revelate nulle signo de disturbation histologic. Le implantate magnetes es perfectemente tolerate. Le magnetismo es completemente innocue e ha nulle effecto, excepte le effecto de mantener le dentatura in position.

Le implanta Behrman-Egan consiste de un magnete de platinum e cobalt completemente inveloppate per un copertura del plastico polytetrafluorethyleno. Iste plastico es probabilemente le materia le melio-tolerate per le texitos que nos cognosce. Le magnete mesme mesura ¼ per ⅛ per ⅛ pollice (o circa 0,64 per 0,32 per 0,32 cm). In su forma le magnete es un cylindro applattate a lateres opponite. In contrasto con le majoritate del magnetes in uso general, que es magnetisate longitudinalmente, iste magnetes special ha un magnetisation in le direction de lor diametro. Le dimension e forma del magnete e le direction de su magnetisation esseva seligite pro provider un maximo de energia con un minimo de massa. Iste magnetes es non simplemente "permanente," illos ha un potentia magnetic que se mantene a transverso le integre vita del

individuo in question. Le sol influentia capace a dismagnetisar los es altissime voltages (per exemplo un colpo de fulmine) e extremissime temperaturas que excede le limites de toleration del organismo human. Le copertura de plastico que inveloppa le magnetes consiste de 7 stratos, sed su spissura es solmente 1/500 pollice (o circa 1/200 cm). Attachate al magnete implantate e coperite de plastico es un reticulo de tantalium que mantene le position del magnete quando le gingiva es suturate super illo. Tantalium per se es un elemento natural e es tolerate benissimo per le texitos. Secundo recente experimentos animal, le alligato de platinum e cobalt, ex le qual le magnete es fabricate, pare esser un substantia multo ben tolerate per le texitos, mesmo in le absentia de ulle copertura de plastico.

Le intervention chirurgic in placiar le magnetes es non plus traumatic pro le patiente que un extraction de dente. Illo equivale al preparation per le dentista de un plumbage, excepte que le foratura affice le osso in loco del dente e que un implanta es inserite in loco de argento o auro. Le bucca del patiente equipate con un implanta Behrman-Egan ha exactemente le mesme apparentia como ante le operation. Solo le roentgenographia pote deteger le presentia del magnete. Le dentatura usate es precisemente identic con dentaturas conventional, excepte que le dentista insere a ambe lateres un magnete in correspondentia con le magnetes in le maxilla. Iste insertion require solmente alicun minutas de labor.

Que es le valor de iste probate technica pro personas con laxe dentaturas al parte inferior del bucca? Patientes previemente a pena capace a murmurar a basse voce sin currer le risco de displaciar lor dentaturas, se trova nunc capace a aperir le bucca grandemente, a extender o elevar le lingua, etc., e omne isto sin le minime risco de displaciar le dentatura.

Patientes qui previemente se faceva practicamente eremitas, es nunc active in lor circulo social. Patientes qui quasi moriva de fame a causa de lor incapacitate de ben masticar, nunc continua accrescer in peso. E omne isto es devenite possibile per un minor intervention chirurgic que require circa 20 minutas de labor pro cata latere del maxilla e per un augmento de 10 minutas in le tempore requirite pro fabricar un dentatura conventional.

AMERICAN DENTAL SOCIETY OF ANESTHESIOLOGY

The American Dental Society of Anesthesiology has opened its membership to all members of the American Dental Association. The primary purpose of this group is to improve and advance the art of anesthesia in the dental office.

Application for membership can be obtained by contacting Dr. Jay R. Mervis, 510 Walnut Avenue, Clairton, Penna.

THE IMPLANT DENTURE*

ISAIH LEW, B.A., D.D.S., F.A.I.D.†

Throughout the ages man has attempted to repair the ravages of our environment to human tissues by the use of some foreign material. The concept of the implant is not new. Petroneus reports sixteenth century efforts at repair of the cleft palate with gold. The use of steel, iron, copper, silver, aluminum, magnesium and even glass has been attempted. Maggiolo of Paris in 1809, Edmonds of New York, 1889, Schoel in 1905, and Greenfield in 1913[1] are just a few of the early pioneers in the use of alloplastic materials to restore lost segments of the dental arch. All experienced little or no success. It was not until 1940[2] when Veneble, et al, reported on their now classic research on the electro-passive nature of the metals tolerated by human tissues, that the field of implant research was placed on a scientific footing. This brought the implant to clinical maturity. In 1943, Bernier and Conley[3] confirmed these findings and pointed to the possibility of the semi-buried implant as a feasable rational, especially in the mouth, paving the way for its application in oral prosthesis. Strock,[4] McCall[27] and Weinberg[5] attempted to apply this principle in single and unilateral tooth replacement. Finally, 1948, the first successfully lower implant was reported by Goldberg and Gershkoff[6] to be followed by a profusion of reports from other pioneers with improved designs and techniques,[7, 8, 9, 10, 30] most of them awaiting the proof of time and experience for validity.

Because of the growing recognition for the need of improved prosthetics to the ever perplexing atrophied mandible (Fig. 1), many parallel efforts at resolving this problem have been confused with the implant in the minds of the average practitioner. Thus, we must separate the full implant from the venable screw type,[4] or the magnetic implant;[11] the transplanted molar tooth germ;[12] the use of autogenous bone graft or chips of restoring alveolar bone;[13] the use of plastics (polyethylene or acrylics) in lieu of Vitalium,[14] the use of Vitalium implant for restoration of mandible,[28] and finally, the use of magnets in the denture in opposition[15] for the purpose of effecting greater stability.

In the past fifty years, great strides have been made in the field of prosthodontia, in the understanding of centric, or hinge axis; in the development of stable bases, vertical dimensions; in achieving maximum function and aesthetics. And yet, a greater number of patients with increasing frequency present atrophied maxillae, and mandibles which defy the best prosthetic efforts. These patients make the rounds of our finest prosthodontists and, in desperation, have prevailed on some of us to attempt more radical implant procedures, which have, in a great number of cases, been the only satisfying service the profession has been able to achieve.

Fig. 1. Radiograph of atrophied mandible, suitable for implant, with mandibular canal running close to the crest of the ridge.

All too often, and in many instances justifiably, these problem patients were either dis-

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missed as neurotic, or perhaps, slightly improved by correcting extension, vertical, balance, centric, etc. Seldom has a prosthodontist lifted the mucosa, or radiographically examined the mandible, for the purpose of ascertaining the possible contribution of factors such as a high mental foramen on the crest of the ridge, dehiscent canals, high muscle attachment, no vestibule, inoperable spiny ridges, etc., to the failure of the conventional denture. In the process of direct impression procedures for implant operations, we have observed that these atrophied mandibles present with greater frequency enlarged mental foramen with sensitive artery, vein, and mental nerve not only on the crest of the ridge, but often back in the molar area directly under the greatest stress of the appliance. Not infrequently has alveolar bone atrophied to the point where the roof of the canal has disappeared to produce a dehiscency not very tolerant to a denture base. We also observe that the mandible in losing vertical dimensions, turn lingually forming a sharp lingual border from molar to molar. This presents insurmountable functional problems in the best of denture techniques. Some prosthodontists and surgeons in desperation may suggest radical alveolectomy in an effort to achieve a more rounded and tolerant osseous structure beneath the mucosa. Though the implant technique may appear to be a radical procedure, we have, paradoxically, developed a great respect and conservatism for the remaining osseous structures. We have observed that with the removal of the outer thin layer of cortical bone in alveolectomy, a rapid absorption of the cancellous bone occurs for the year or so until a new layer of cortical bone is formed. In the meantime the resulting atrophy creates greater problems with diminished bone than had presented itself at the outset.

The psychologist has often explained the hysteria accompanying the loss of a tooth or any bodily tissue, as the response to the fear of castration, or loss of potency. The emotional stress associated with the prospect of becoming edentulous, especially with the active middle aged patient, can often reach such proportions, as to resist the accommodation to the finest efforts at oral rehabilitation. In many of these patients the only oral restorations they will accept are such that would become as close to their own in security and stability. Their problems are as real and deserving of recognition as any serious malady—and can no longer be dismissed in the general file of neurotics.

Our profession is also challenged by the growth of a new science, an outgrowth of the increased longevity of our contemporaries. This science of geriatrics attempts to keep our older patients more useful, functional, and contributing members of our society. This increased longevity inevitably produces more dwindling osseous structures and associated denture problems. To our mind the implant has provided our profession a very promising contribution in its approach to satisfying this need of geriatrics.

Fig. 2. Anterior-posterior view of radiograph showing patient with upper and lower implants inserted in 1951 with old technique. Left bicuspid screw showing rarifaction due to pressure of superstructure. Anterior and posterior screws normal.

In developing objectivity towards our professional efforts, let us attempt to analyze some recent efforts to determine the effectiveness of our prosthetic service to our patients. Manley and Vinton[16] showed that 500 ideal dentures gave an average efficiency of 23% in mastication. Knowlton[17] comparing pressure tolerance, using Boos' pressure indicator, suggests that a patient with a denture tolerating 20% pressure, advanced to 70% tolerance with an implant.

Fig. 3—EVOLUTION OF CURRENT IMPLANT DESIGN FOR THE MANDIBLE

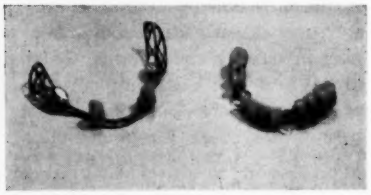

Fig. 3A Early attempts of modification of framework, mesh and abutments.

Fig. 3B Early Goldberg and Gershkoff design—note five screw holes.

Fig. 3C Early attempts of modification of framework, mesh, and abutments.

Fig. 3D Optimum design currently employed.

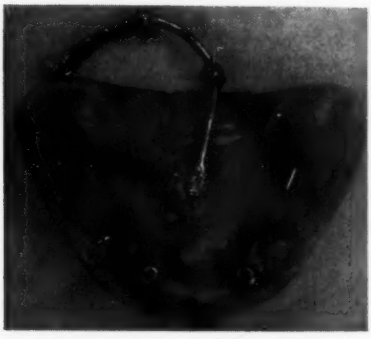

Fig. 3E Optimum design currently employed.

The work of Yurkstas and Curby[18] and more recently that of Frechette,[19] and Stromberg[20] is leading to a more realistic and more scientific method for determining efficiency of artificial teeth and forces exerted under dentures. Their findings will ultimately foreshadow the beneficial qualities of our most successful denture. Our assurance to patients of increased comminution and mastication with dental appliances may have to be re-evaluated, and a search for a more efficient mechanism may be more intensified.

Regretably, time limits discussion of the development of the implant during the past six years, from the early uncertain template method to the more accurate two stage technique.[21] Problems of trauma, stability, parasthesia, bone loss, type of tooth material, early fixation and periods of being without teeth, all have been overcome and more fully covered in other reports.[22] (Figs. 2 and 3.)

It is difficult to discuss implants without describing some of the technique. It has been the lack of understanding the method in all of its ramifications that has resulted in failures—and not the rationale itself. Failures we have had, and in analyzing these unhappy experiences

we have been able to improve techniques.

1. The primary approach to the implant rests upon the selection of the patient. The patient must be able to understand the complexity of the procedure and to fully cooperate. Thorough examination of medical and emotional shortcomings may save untold difficulties.

2. Having been satisfied with the patient's suitability for the implant, we proceed to take accurate impressions, bite, and wax set-up as in conventional denture procedures.

3. Careful roentgenograms, including lateral plates, occlusal films, and thorough intra-oral pictures help us to locate vital points of import in designing the implant framework, impression trays, position of screws and other form of fixation to be employed. (Fig. 2.)

4. The patient is now ready for the first, the primary impression operation. Tissues are retracted radically. A careful impression is taken in accurate materials using compound, zinc-oxide wash for rubber base materials. Tissues are carefully debrided and coapted. The old denture lined with a suitable material is placed over incision to improve patient comfort. In this most critical phase, most novices fall into the same difficulties and institute a series of errors which can only culminate in a failure. They fail to open tissue adequately, their impressions show lack of detail and extension to the vital dense bone; and often traumatize bone excessively in dissecting the mental nerve and sublingual tissues.

5. Models are now duplicated. The implant and superstructure are carefully designed and fabricated, and radiographs made for faulty castings. Each case must be designed individually by the doctor—and not the technician. Here again failures were caused by untrained dental technicians assuming responsibility for the fabrication of a highly technical appliance, failing to achieve adequate coverage, strength, proper thickness of struts, and position of abutments, and particularly failing to parallel superstructure and consequent occlusal restoration.

6. The second surgical phase should not be attempted until complete coaptation has occurred. Premature entry for the insertion may often cause failure of tissue closure by first intention with the ensuing discomfort of many postoperative efforts. Often we find careless fitting of screws, failure to remove early granulation tissue before fitting implant, and indifferent use of coaptation techniques. The patient is discharged at this time with a prosthetic surgical splint,[23] a denture like platform with anterior teeth developed to ease postoperative problems for the patient while awaiting the fabrication of the final superstructure.

7. Within four to six weeks, the final superstructure is fabricated. Here all the consummate skills inherent in good denture construction, good centric, vertical, balance, function and aesthetics must be diligently applied. Again, failure to use good judgment in selection of type of tooth material; the traumatic effect of natural opposing teeth; failure to avoid ischemic effects of the superstructure pressing on mucosa or implant framework, are some of the factors contributing to complication in the implant.

8. Having inserted a successful implant, the obligation of both surgeon and prosthodontist does not end. Their responsibilities, if they are to maintain a healthy implant, continue for the life of the appliance. Periodic surveillance with radiographs and clinical checks must be arranged. A loose screw, some hypertrophied tissue, excessive wear and closure (inherent in implant denture increased function), all must be promptly attended to, in order to maintain the implant and health of the patient at their optimum. Careful oral hygiene of the patient must be demanded, just as we would of any periodontal patient under treatment.

Observing the many problems confronted, it is surprising to find the percentage of failure to be so low.

We, as general practitioners, would like to consider dentistry and medicine as a true science. As practitioners, our success financially and professionally, much to our chagrin, depends largely on satisfactory cases, comfortable patients and the popularity of our "light hand". Few of us are trained in dialectic thinking, and still fewer can afford complete objectivity in surveying our own efforts. As clinicians, our approach to problems are mechanical, and

CERTIFICATES OF APPRECIATION. (l. to r.) Alexander Soberman, Ira Ross, and Howard Ward receive certificates from Chairman Norman Alderman (rear) for the excellent job of running the 1954 Mid-Winter Meeting. Harry Roth and Marvin Simring were also honored with certificates of appreciation.

MRS. FRANKLIN D. ROOSEVELT GREETS ACADE... highlight of ... United Nations was meeting Mrs... during her ...

1955-1956 NATIONAL OFFICERS. (l. to r. seated) Marcel B. Archambault, Vice-President; S. Leonard Rosenthal, President; William M. Greenhut, President-Elect; (l. to r. standing) Irving Yudkoff, Editor; George G. Stewart, Treasurer; and George J. Witkin, Secretary.

AMERICAN ACADE... DENTA...

Ninth Meeti...

Park Sheraton New ...

May 13..., 195...

CERTIFICATE OF MERIT. Past President Samuel Charles Miller presents a certificate of merit to George J. Witkin for the outstanding manner in which the Ninth Annual Convention was arranged.

CERTIFICATE OF MERIT. Retiring President George F. Clark... sents a certificate of merit to Norman Alderman for the ... 1954 Mid-Winter Meeting.

...ERICAN M... ...n Dental ... Rosenthal ... and the ...

EETS ACADE... highlight of the Academy Ladies' visit to the ... meeting Mr... during her address their group.

NINTH ANNUAL CONVENTION COMMITTEE: (l. to r. seated) Ira Ross; Mrs. Mildred Witkin, Ladies Chairman, and George J. Witkin, Convention Chairman. (l. to r. standing) Irving Yudkoff, Theodore Lite, Abraham Reiner and Jack Englander.

...CADE...DENTAL MEDICINE

...nth Meeting

...aton New York City

...ay 13, 1955

THE GAVEL CHANGES HANDS. Retiring President George F. Clarke (left) presents the gavel to S. Leonard Rosenthal, newly elected Academy President.

...ge F. Clarke ... for the ...

...ERICAN MOMENTO. Doctor M. Ballian, President of the ... Dental Association, presents two pennants to Dr. S. Rosenthal as a token of good will between the Brazilian and the members of the American Academy of Dental Medicine.

PLAQUE PRESENTATION. Retiring President George F. Clarke is presented with the Distinguished Service Award by Past President Sidney Sorrin.

emperical—a trial and error approach. In these efforts, only positive results bring applause; failures are of negative values in our personal aggrandisement. Therein lie some of the reasons for countless articles on new procedures, operations, techniques, medications, and panaceas, with few reports of their failures, or scientific attempts at their evaluation.

During the past seven years, I have scanned all our periodicals for some such scientific evaluation on full denture implants; seeking a valid evaluation of a premise; a dialectical deduction; experimental proof, and finally, a logical conclusion. Many such evaluations have been assayed by prominent prosthodontists and oral surgeons for the purpose of guiding the general practitioner in a wealth of confused opinions.

Let us examine such a manuscript. In the July issue of the Journal of Oral Surgery,[24] Nichols presented a lengthy report on an original research on dogs in which he would determine the validity of the denture implant. This article is beautifully written, well illustrated, with copious histological slides, and frankly, a very impressive effort. Dr. Nichols concludes the article with the observation that full denture implants are not feasable. In an early and brief reference to the technique of his experiment, he states that several teeth were removed from one segment of the dental arch of a dog, and subsequently replaced with a Vitalium Implant *after the method of Goldberg and Gershkoff*. A careful reading of that sentence buried in the first few paragraphs, will invalidate the entire premise of his thesis. No one having any experience in implants would attempt to insert an implant on recently extracted alveolar bone; nor would we expect a unilateral implant to behave as effectively as a full implant—the displacing forces of function and resistance to displacement are different in each instance; but what is most important, the slightest insight into implant procedure would show the absence of any similarity in the technique used by Nichols on dogs to the early efforts of Goldberg and Gershkoff.

This little sentence made all the difference between a well documented and valid scientific treatise and a mere contribution to the confusion that he set out to clarify.

Why is there this needless recourse to laboratory animals when there are a thousand human implants available for examination and evaluation. We have passed the stage of the dog and the monkey as far as the Vitalium implant is concerned. Their limited usefulness in implant research has long been established by Bernier et al[3] and we know this limit is in the tolerance tests, and never function. There may be other materials suitable for implants to be evaluated, such as polyethelene, acrylic, teflon, and combinations of these with electro-passive metals. These and other preliminaries must be first tried in the laboratories. Today, we know that approximately 70-80% of all lower implants have given difficult denture patients comfort and function far exceeding that obtained with conventional prosthesis for periods ranging up to seven years. This reality we can not ignore, irrespective of the failure of the technique on dogs, in objective evaluation of the implant.

We know that upper implants do not respond as well as lower implants; and of lower implants, the more difficult the ridge, the more favorable the prognosis. Fortunately, the degree of success is most favorable to the most needy, the badly atrophied mandible.

In the upper implant, repeated improvements appear from month to month and there appears good promise of a perfected technique in the near future.[8, 25, 29]

The unilateral or free-end-saddle has been another challenging phase for implant research which has met with problems unique to this particular restoration. Although we have several successful restorations of several years duration, our results have not been consistently perfect, nor have they been in long enough to effect adequate evaluation at this time.

In discussing our approach to the difficult denture problem, we must bear in mind other attempts which have met with varying degrees of success, and are applicable in instances where the implant is not feasable or desirable. Our profession will grow only in proportion to which we encourage frank investigation and exchange of views—probably the greatest reason

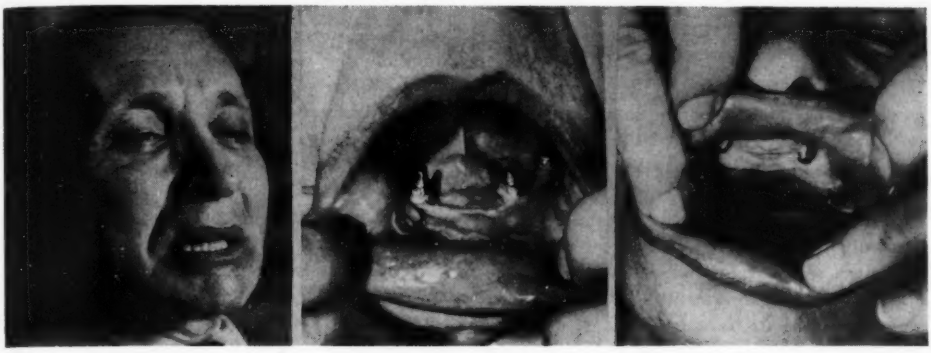

Fig. 4A Fig. 4B Fig. 4C

Fig. 4A Patient with a badly atrophied and missing alveolar bone in the maxilla and the mandible; a history of plastic efforts unsuccessfully tried; and complete inability to retain any form of conventional prosthesis. Illustrations show the complete aesthetic reconstruction with implant superstructures (4A).

Fig. 4B The full lower implant one year after insertion with splint method and no screws.

Fig. 4C The fully upper implant in the same patient using the splint technique and only two screws.

for my pleasure in addressing your Academy.

Dr. Behrman,[11] who will follow me on this symposium, has some five years ago, expressed pessimism concerning the semi-buried implant—and rightfully so. Most of his objections were based on accepted surgical procedures, but especially on the failures of the eye implant experienced by the ophthalmologic surgeon. Observing our own problems, we began to understand why their valiant efforts were bound to meet with failure.

Firstly, careful study of the work of Bernier and Conley,[3] indicated that implants protruding outside the oral cavity, were accompanied with greater inflammatory process than those exposed to oral fluids. Secondly, we have learned that a successful implant must be constructed over a stable base, free from pull of facial or optic muscles, and displacing forces must be dissipated in a resultant force, tending to approximate the implant to the base. The ophthalmologist placed a crib on the eye ball near or on movable musculature, with the weight of the eye prosthesis acting as a lever turning the mesh away from the base, with consequent exfoliation. The full denture implant was successful only because the clinician fully understood the forces of function playing on the implant, and modified the construction of the appliance so that it would best resist exfoliation under function.

As we begin to understand the many ramifications of the implant procedure, we wonder that dentists will attempt this operation without availing themselves of all the facts; and having fallen into difficulties will condemn the implant rationale as unfeasable. Boedecker[26] editorializing in the New York Dental Journal, stresses the blessing of the implant to the difficult edentulous patient, and must be commended for his advice of caution in its selective application. But here again the implant is chastised for the reckless abuse of the technique by practitioners who are not qualified to attempt the implant, nor are they representative of the many dentists who have brought implants to its present stage of acceptance. The American Academy for Denture Implants was founded several years ago, for the sole purpose of preventing exploitation and abuse, and to provide a forum for the exchange of progress and development in implants. To get some idea of the strict selective

judgment we exercise in judging a patient's need for an implant, we would like to report that of every twelve patients who appear at our office or hospital clinic, desirous of a lower implant, one or two will present the necessary need, understanding, and medical qualifications which to our standards will be suitable for the full lower implant.

Why have lower implants remained in good function, free of infection, and with relatively stable qualities for as long as seven years—and appear to be able to remain indefinitely? Again we would like to have for your reply a well documented treatise. We must content ourselves with our own observations which of necessity are limited to clinical and personal description.[22] The healthy implant remains firm and pink and free of any discharge around the abutment. The latter behave like any normal tooth even to the accumulation of calculus, and must be cared for periodontally in similar fashion. (Fig. 4B) Radiographically we see very little bone change—with a normal and even rate of absorption common to the age and physiological condition of the patient. (Fig. 2) Screws, if in normal position, should show healthy and close bone adaptation. In describing conditions around the strut, the mucosa forms a protective sheath around the strut, very similar to a tight rubber sleeve. This sheath appears resistant to the knife, is extremely dense, glossy, and unique to the implant.

Microscopically this differentiated tissue takes a pink eosin stain, showing an homogenous matrix with compressed fibrocytes. In identifying this tissue we have applied the term peri-implant sheath to facilitate reference.

A more complete study will have to await the disposition of our pedagogical institutions who have the scientific method and time to effect such a project. We can only present you with two representative implant patients of six and four years duration, so that you can give us the benefit of your clinical scrutiny and observations. The older implant was inserted with the older more hazardous template technique. The latter was a more advanced and exacting procedure. In each case the patient presented the proverbial pocket-full of well executed dentures, and only submitted to the implant out of desperation. In the case of four years duration, the patient had previously been submitted to orthopedic efforts at restoring the alveolar height by autogenous bone graft from the hip. The skin graft effected to close the wound can still be seen in the vestibule adjacent to the implant. All these efforts met with little success, the dimensions of the mandible were so slight, that the use of screws for fixation of the implant was eliminated for fear of surgical fracture. For fixation we restored to the surgical prosthetic splint,[23] which provided the necessary stability, comfort, reduced edema, and suture loss, elimination of paresthesia and trauma of screws. This patient never experienced an edentulous period, as in the former technique, and achieved fibrous fixation more rapidly with the results you have observed.

These patients are representative of a great number in which the implant denture has been successful and can be recognized as feasable—to the ultimate realization by our profession of the part the implant can contribute, when judiciously used, to our armamentarium in approaching the difficult denture patient.

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DENTATURA IMPLANTATE

Dr. dent. chir. Isaih Lew (B.A., F.A.I.D.)

SUMMARIO IN INTERLINGUA

A transverso le curso del seculos, le homines ha semper tentate reparar, per le introduction de alicun materia estranie, le damnos histologic resultante del effectos de lor ambiente. Le notion del implanta non es nove. In le dece-sexte seculo, Petroneus reportava effortios a reparar uranos-chisis con auro. Pro le mesme objectivo on ha tentate usar aciero, ferro, cupro, argento, aluminium, magnesium, e mesmo vitro. Le nomines de Maggiolo (Paris, 1809), Edmonds (New York, 1889), Schoel (1905), e Greenfield (1913) es solo un breve selection del lista del prime pioneros in le campo del restauration alloplastic de defectuose arcos dental. Omnes incontrava pauc o nulle successo. Solo in 1940, quando Veneble e su collaboratores reportava lor recercas—nunc devenite classic—super le natura electropassive del metallos tolerate per texitos human, le recera in le campo del implantas alloplastic recipeva su fundation scientific. Le implanta attingeva su maturitate clinic. In 1943 Bernier e Conley confirmava le constatationes de Veneble. Illes signalava le possibilitate theoric, specialmente in le bucca, del implanta semi-inhumate e assi preparava le application de iste typo de implanta in prostheses oral. Strock, McCall, e Weinberg tentava adoptar iste principio in le reimplaciamento de dentes individual. Finalmente, in 1948, le prime successo con un implanta in le maxilla inferior esseva reportate per Goldberg e Gershkoff. Lor publication esseva sequite per un marea de reportos de altere pioneros qui proponeva nove e meliorate structuras e technicas, sed le validitate de istos attende le proba del tempore e del experientia.

In le passate 50 annos le arte prosthodontic ha facite grande progressos in le comprension del axe centric o cardinal, in le disveloppamento de stabile bases e dimensiones vertical, e in le attingimento de optimos functional e esthetic. Nonobstante, un crescente numero de patientes presenta con crescente frequentia maxillas atrophiate e mandibulas que defia le melior effortios prosthetic. Iste patientes face le ronda de nostre plus distinguite prosthodontistas e in lor despero illes ha a vices succedite a inducer le un o le altere de nostre collegas a tentar procedimentos plus radical de implantation, le quales—in un grande numero de casos—esseva le sol servicio que nostre profession poteva offerer.

Le question se impone proque implantas in le maxilla inferior ha mantenite un bon functio namento—sin infection e con relativemente stabile qualitates—durante periodos de usque a 7 annos e pare capace a mantener se assi indefinitemente? Certo, nos esserea felice si nos poteva presentar le responsa in le forma de un ben documentate essayo; sed nos debe contentar nos con reportar nostre observationes subjective que es necessarimente limitate a descriptiones clinic e personal. Quando un implanta es in bon condition, illo remane firme e rosee e sin ulle forma de discarga circa le base. Tal dentes se comporta como omne typos de dente normal; illos mesmo accumula calculo e require le mesme tractamento periodontic como lor partenarios natural. Vites que se trova in position normal deberea exhibir un firme e salve adaptation al osso. Le membrana mucose forma un stricte vaina protective circa le gamba del implanta. Iste vaina ha le apparentia de un manica de cauchu; illo se monstra resistente sub le cultello e es extremente dense e lustrose e representa un characteristic unic del implanta.

Un plus complete studio debe attender le disposition de nostre institutiones pedagogic que ha le methodos scientific e le tempore pro executar un tal projecto. Al momento presente e sub le conditiones presente nos debe limitar nos a reportar le casos representative de 2 patientes con implantas de un duration de 6 e 4 annos. Iste casos es submittite al scrutinio de nostre lectores in le spero de obtener lor observationes e commentos clinic.

Le prime del 2 mentionate implantas esseva inserite per medio de un ancian e minus avantiate technica. Le secunde representa un plus disveloppate e plus exigente procedimento. In ambe casos le patiente arrivava con le collection costumari de ben-executate dentaturas e acceptava le plano del implanta solmente como un solution desperate. In le caso del implanta de 4 annos de duration, le patiente se habeva previemente subjicite a effortios orthopedic de restaurar le altitude alveolar per autogene graffos ossee ab de coxa. Le graffo dermatic effectuate pro clauder le vulnere es ancora visibile in le vestibulo adjacente al implanta. Omne iste effortios habeva pauc successo. Le dimensiones del mandibula esseva si minime que le uso de vites pro fixar le implanta esseva impossibile a causa del risco de un fractura chirurgic. Pro effectuar le fixation nos nos serviva de un prosthese chirurgic que provideva le requirite stabilitate. Illo resultava in conforto pro le patiente, reduceva le edema, e eliminava le parasthesia e le trauma del vites. Iste patiente nunquam experientiava le periodo edentule que esseva inevitabile con le previe technica, e etiam su fixation fibrose se attingeva plus rapidemente.

Iste patientes es representative de un grande numero de alteres in qui le dentatura implantate ha succedite. Illes prova que le technica del implanta es practicabile e representa, in uso judiciose, un importante addition a nostre armamentario pro le tractamento de patientes con difficultates special del dentatura.

THE AMERICAN ACADEMY OF PERIODONTOLOGY

The American Academy of Periodontology will hold its annual meeting at the Sheraton-Palace Hotel in San Francisco, California, on October 13, 14, and 15, 1955.

An excellent program has been arranged which will be of great value to all dentists interested in periodontics. Registration will begin Wednesday evening, October 12th. Members of the American Dental Association and foreign dental associations are welcome. There will be a nominal registration fee.

POSITIVE VISUAL HALLUCINATIONS IN HYPNODONTICS*

PHILIP AMENT, D.D.S.†

It is our intention to hypothesize that visual and auditory hallucinations in hypnodontics, where the operator does not project himself into the picture, is of definite value to the dental patient in many cases as a catharsis or as a wish fulfillment.

For many years, patients have related interesting and vivid word pictures of incidents they visualized while under hypnodontics. The stories they portrayed seemed very clear and were given in orderly fashion, for the most part. Yet, although they were given interestingly enough, it was not until recently that we observed some relationship between positive hallucinations under hypnosis and dreams during ordinary sleep. Whereas the former were related in an orderly fashion and no interpretations were expected, the dreams were of such a nature that they were related as having occurred in a peculiar fashion, distorted and unbelievable.

Much has been written by the ancients and also present day psychologists and psychiatrists[1] about interpretation of dreams. Freud has observed that dreams have a preference for recent impressions. Somehow, when analyzed, there is often a relationship of the dream content to the happenings of the day or the previous day. Dream content may be related also to something that happened in childhood. Grotjahn feels "that in children (2 to 3 years of age) play, fantasies and dreams are very closely related to each other and that what in an adult would be called hallucinations may be called vivid visual imaginations, very characteristic of infant thinking; and if such fantazied hallucinatory form of memory is observed in a sleeping child it may be called a dream. A good part of these dreams, in particular those of food, are devoted to wish fulfillments, but others are not."[2,1]

DREAMS

In the introduction of *Basic Writings of Sigmund Freud*,[3] Brill discusses Freud's ideas on dreams and the unconscious. It is the latter's thought that "dreams represent the hidden fulfillment of an unconscious wish". Wishes are fulfilled, the subconscious tensions are removed, and the individual has his sleep. Here we have two factors in dreams that we have attempted to relate to positive hallucinations in hypnodontics, as follows:

1. The preference for recent impressions or something of a recent impression as part of a recalled experience.
2. The fulfillment of an unconscious wish and also the fulfillment of a conscious wish.

First, we should define the type of positive hallucination we are discussing. We might better call this type of hallucination, where a patient visualizes some scenery or a particular occurrence, a positive illusion or a positive perception.[2,8] It is our procedure, wherever possible, to avoid projecting the operator's thoughts into the content of the hallucination under hypnodontics. The patient is asked to visualize a pleasant scene. In that way, we do not interfere with the patient's trend of thought and we do not paint a picture for him. The patient visualizes the results of his own unconscious wish fulfillments. We merely lend empathy to the whole story.

This is comparable to the work of Harold Rosen in which he attempts to bring out the underlying causative factors of some hidden psychosomatic disturbance that the patient may have which he calls "the emotion of the moment".[4,1] He places the patient under hypnosis and has the patient recall the emotional causative factor of his psychosomatic disease immediately, without the operator entering into the picture in any way.

* Read at the International Congress of Dentistry, a Section of the International Meeting of Medicine and Surgery at Turin, Italy, June 5, 1954.

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Kanzer states in his *Use of Dreams Induced by Hypnotic Suggestion.*[5] "The most general principle concerns the introduction of a considerable measure of free scope for the patient." This is achieved, e.g., by first permitting the subject a "certain amount of free association" and in so doing to elicit the "dominant mood or idea of the moment", which is then allowed to enter the determination of the suggested topic.

Because we ask the patients to watch something pleasant in their imagination, we do not bring out the "emotions of the moment". However, we are careful not to paint any picture for our patients so as not to project ourselves into their imagery. In so doing, we do not enter into anything of a psychiatric nature. As a matter of fact, we as dentists use hypnodontics mainly for relaxation and anesthesia. We just listen to our patients' stories and add nothing of our opinions to them. If we do observe anything of a psychiatric nature, the patients are referred to psychiatry for analysis and for treatment, if necessary.

HALLUCINATIONS UNDER HYPNODONTICS

It has been our observation that the majority of hallucinations under hypnodontics seem to follow this pattern. For example, in a lecture given recently at York, Pennsylvania[6] two dentists were given second phase inductions and both related obvious wish fulfillments in their hallucinations. One dentist visualized that he had caught six beautiful rainbow trout. When asked whether he had caught any trout this year, he answered that he had not. Similarly, another dentist awoke with a start and exclaimed joyfully, "What do you know—I just shot my first buck!" Both of these hallucinations are obvious wish fulfillments.

After the patient is awakened from the trance state, he is asked numerous questions, among which are these two:

1. What happened yesterday that may have a bearing on what you visualized to-day? (All patients give a startling glance at this moment and react with a great deal of surprise to this question. We then hasten to tell the patient that this question is asked to ascertain proper results for a psychological paper and we would appreciate it if they would go into detail.)
2. Was there anything in the visualization that was related to the fulfillment of a wish you may have had?

The following is a resume of a number of sessions with a young male, age 10, who presented himself for dentistry with rampant decay and a terrific fear of dentistry.

On November 29, 1953, he visualized that he took a plane trip to London and went hunting. He was listening in his imagination to the song entitled, "Put Your Arms Around Me".

On November 30, 1953, he visualized he had caught twenty muskies. This was very vivid and definite to the patient. He felt he went out in a big boat with his father, his Uncle Jim and a friend, Dick. They were casting with night crawlers. He was listening to a television theme song called "Dragnet".

On December 12, 1953, he visualized he awoke from sleep, called his sister and together they went down to see the Christmas tree. They opened their presents. He got hockey skates, a quiver, and some games. His father opened his presents; he got a pipe and pipe holder. The boy then went to church. After he returned home from church, he played games all day.

On December 19, 1953, he went skating with friends. They played hockey. Then they built a fire and roasted some potatoes. After they ate the potatoes, they went home. (The food may be construed as an oral factor here and the satisfaction of appetite as a wish fulfillment).

On December 23, 1953, the boy and his friends rode in a bus to the Centennial Grounds where they played ball. His team, the Holy Helpers, played the Seneca Indians. He made a home run. His team won. The score was 1 to 0. They went home by bus and then went down to the drug store. The coach bought each member of the team an ice cream sundae. Before coming to the dentist's office, the boy did some day-dreaming. He wished it were spring so he could play baseball.

On eight other occasions similar visualizations were enjoyed by the patient while we completed the dentistry. All of them were associated with food and wish fulfillment.

DREAMS UNDER GENERAL ANESTHESIA

This may be comparable to what happens with dreams under general anesthesia. Federn observed when he examined his own dream while under general anesthesia that "The principle of wish fulfillment is overt." He mentioned also that he had to go back to his childhood to find day dreams which correspond to his anesthesia dream (under nitrous oxide). In this dream he had become a chief statesman of many territories. Here again, we, as dentists, have another use for hypnosis and do not go into psychiatric phases. Schneck gives details of self-hypnotic dreams of a patient in hypnoanalysis.[7] He evaluates the dreams, has the patient interpret them and then brings into "sharper focus" evaluation of problems and outlines of treatments. We, as dentists, suggest a pleasant visualization and do not project ourselves into it. This results in a very enjoyable visit and dentistry becomes a pleasure to the patient.

We have listed forty-five cases and have made the following observations. We have observed that fourteen of these cases had some elements that were related to the happenings of the previous day. Twenty-four cases were related to occurrences that happened in childhood. Three cases were obvious cases of ventilation — a catharsis. Thirty-six cases were obvious wish fulfillments. These cases were given a total of 107 inductions from December 2, 1953 to February 1, 1954. Although we are considering the elements of our original hypothesis, there is no doubt that they also show many interesting phases of a psychological nature. Since it is our premise as dentists to stick to our own art, no attempt will be made to analyze these visual and auditory hallucinations from that angle.

SUMMARY

It may be stated that when positive visual hallucinations are handled without a word picture from the operator in hypnodontics, the patient has the opportunity to use the procedure as a review of recent happenings and benefits by relieving pent-up emotions—a mental catharsis of the subconscious. The illusion content is invariably of such a nature as to indicate a fulfillment of a subconscious wish and, having fulfilled it, the patient is the better for it. This may be one of the many reasons why patients awaken from hypnodontics feeling much better emotionally than when they first arrived at the dental office.

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POSITIVE HALLUCINATIONES VISUAL IN LE STATO HYPNODONTIC

Dr. chir. dent. Philip Ament

SUMMARIO IN INTERLINGUA

Pro multe annos, patientes in stato hypnodontic ha relatate vive e interessante picturas verbal de occurrentias que ille observa. Le historias relatate per illes pareva generalmente multo clar e esseva presentate in un ordine coherente. Nonobstante, ben que le presentation de iste historias esseva certo interessantissime, il esseva solmente in le recente passato que nos ha observate un relation inter le positive hallucinationes del stato hypnodontic e le sonios que occurre in le stato dormiente normal. Le hallucinationes hypnodontic es relatate in bon ordine e le patiente expecta nulle interpretation, durante que sonios es frequentemente relatate como occurrentias de natura extraordinari, distorquite, e incredibile.

Multo ha essite scribite—per le ancianos e in nostre dies per psychologos e psychiatros—super le interpretation de sonios. Freud ha observate que sonios prefere impressiones recente. De un o altere maniera, le analyse de sonios monstra frequentemente un relation de lor contento al evenimentos del die presente o precedente. Del altere latere, le contento des sonios pote etiam haber un relation a occurrentias del prime juventute. Grotjahn crede "que in juveniles [de 2 o 3 annos de etate], phantasiar, jocar, e soniar es intimemente interrelationate e que le phenomenos que in adultos esserea appellate hallucinationes pote esser designate in infantes como vive imaginationes visual que es multo characteristic del pensar infantil. Si un tal forma de memoria phantasiate e hallucinatori es observate in juveniles in stato dormiente, nos designa le phenomeno como soniar. Un grande numero de tal sonios, specialmente illos concernite con alimentos, se occupa de satisfacer desiros; sed il ha alteres con altere contentos."

On pote asserer que si le positive hallucinationes visual del patiente in stato hypnodontic es recipite passivemente per le personas presente, le processo representa pro le patiente un opportunitate de passar in revista certe recente evenimentos de su vita e de disembarassar se per consequente de accumulate emotiones in un specie de liberation cathartic del subconsciente. Le contento illusional del historias relatate es semper indicative del satisfaction de un desiro del subconsciente, e post un tal satisfaction le patiente se senti melio. Hic nos ha possibilemente un del rationes pro que le patiente se trova emotionalmente plus equilibrate post quitar le stato hypnodontic que al tempore de su arrivata al officio dental.

AMERICAN ACADEMY OF DENTAL MEDICINE ANNUAL AWARD

Upon recommendation by their respective medical and dental colleges the following senior students have been nominated for the Award for Proficiency in Dental Medicine given annually by the American Academy of Dental Medicine. This award consists of a duly inscribed certificate and a five year subscription to the Journal of Dental Medicine.

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*WALTER J. DALY 1300 W. Michigan Street, Indianapolis, Ind.	John D. VanNuys, Dean, Indiana University School of Medicine, Indianapolis, Ind.
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*CHARLES B. LANDIS 938 North LaSalle St., Chicago, Ill.	Richard H. Young, Dean, Northwestern Medical School, Chicago 11, Illinois.
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Medical Views on Oral Problems

PROPOSED THEORY FOR INVESTIGATION OF CANKER SORES*

TO THE EDITOR:—*On page 301 of* THE JOURNAL, *Jan. 15, 1955, a proposed theory for the investigation of oral canker sores is mentioned. Although I have never reported my own treatment, I have used it with unusually good success for the past three years on myself, members of my own immediate family, and patients in my practice who have presented this condition. The treatment is simple. I used 8 mg. of Chlor-Trimeton four times a day for three days. Results are usually noted within 24 to 48 hours. Treatment is then continued for another 24 hours after disappearance of the canker sores to prevent a possible recurrence. A response to an antihistaminic seems to suggest a possible sensitivity factor in the origin of aphthous stomatitis.*

Joseph Glasser, M.D.
8701 Shore Rd.
Brooklyn, N. Y.

* Queries and Minor Notes, J.A.M.A., April 30, 1955, p. 1666.

INFECTIOUS MONONUCLEOSIS*

TO THE EDITOR:—*A young lady had infectious mononucleosis in March, 1954. The heterophil antibody with guinea pig absorption was positive in a dilution of 1 to 448. There was no jaundice. Since that time she has had almost monthly recurrences of lymph node enlargement, malaise, and slight fever. She was given tetracycline on two of these occasions with apparent prompt improvement, or at least a lessening of the symptoms. At present, the heterophil test, blood count, sedimentation rate, urinalysis, Brucella agglutination, coccidioidin skin test, and tuberculin patch test are all normal. The histoplasmin skin test is positive. There are no enlarged nodes. Physical examination reveals no abnormalities except that she is 15 lb. (6.8 kg.) underweight. 1. How long may these recurrences persist? 2. What is the longest anyone has ever observed infectious mononucleosis to recur in this manner? 3. Realizing that there is no specific treatment for the disease, have you any suggestions that might prevent or lessen the severity of the recurrences? 4. Although I have felt no significantly enlarged nodes in this patient, could it be possible that histoplasmosis might follow such a low grade and recurrent course?*

E. C. Heyde, M.D.
Vancouver, Wash.

* Queries and Minor Notes, J.A.M.A., April 30, 1955, p. 1664.

ANSWER.—The question of recurrent attacks of infectious mononucleosis frequently arises when a patient experiences signs and symptoms much as they existed when the diagnosis was originally made. Probably few of these are genuine recurrences. In a published account of five patients alleged to have had recurrent infectious mononucleosis, the heterophil test was done in only two instances at the time of the original attack, and one of these was normal. During the supposed recurrence the heterophil test was done only once, and it was not diagnostic. In other words, the diagnosis was not established in four cases originally and in none at the time of recurrence. This consultant has observed bona fide recurrences in only two patients, one 14 months and one 27 months after the original attack in a group of over 500 cases. A titer of 1:448 on guinea pig-absorbed serum would constitute almost incontrovertible evidence of infectious mononucleosis in the patient under discussion, but no evidence for this diagnosis exists at the present time. The improvement noted with tetracycline suggests that throat cultures and antistreptolysin titers might be informative. The positive histoplasmin test in the presence of negative coccidioidin and tuberculin skin tests cannot be disregarded. A Histoplasma complement-fixation test done during an asymptomatic period and repeated at time of recurrence of symptoms might show a change in titer; however, the low grade systemic symptoms, normal sedimentation rate, and normal physical findings make the likelihood of histoplasmosis quite remote.

FOUL BREATH*

TO THE EDITOR:—*In 1945 I had infectious hepatitis. I did not remain strictly in bed, but walked around in the hospital after the first five days when I was acutely ill. I did well and had no trouble until 1949, when pain developed in my right side over the liver and gallbladder. The pain is in one small spot at the level of the last rib and slightly lateral to the mid-clavicular line; has never been severe and has never varied from this spot: will last for a month or two, and then cease for a month or more; and increases on ingesting fatty*

foods. My breath is extremely foul, and of an acetone nature, during these times. This condition has become worse, and it is very embarrassing and offensive. Would it be possible for the hepatitis to have damaged the liver cells or affected metabolism of acetone bodies? Complete physical examination was normal with the exception of a sulfobromophthalein (Bromsulphalein) sodium retention of 8% in 45 minutes. Any advice that you give will be appreciated.

M.D., Kentucky

* Queries and Minor Notes, J.A.M.A., March 26, 1955, p. 1172.

ANSWER.—It would be very unusual for a localized painful area to develop as a complication of acute viral hepatitis. The fact that this did not develop until four years after the acute illness of hepatitis makes the hepatitis even more unlikely as an etiological agent. The foul breath of which the patient complains does not suggest fetor hepaticus. The odor of fetor hepaticus is usually a sweet odor and not foul, but it could possibly be confused with acetone. Fetor hepaticus may appear with many liver diseases, and in severe instances of hepatic injury it has been reported to persist for many years. It is suggested that the patient have roentgen examination of the gallbladder and stomach and have thymol turbidity and cephalin cholesterol flocculation tests made.

CANKER SORES*

TO THE EDITOR:—*I have read the query, "Proposed Theory for Investigation of Canker Sores," in* THE JOURNAL *of Jan. 15, 1955, page 301. Within the last two years, I have seen three patients who suffered from recurrent ulcerative stomatitis in rather extreme degree. One of these patients would have canker sores appearing in crops with severe surrounding inflammatory reaction, the whole bout lasting as long as three weeks. This patient's history extended back at least 10 years. The other two cases were similar but milder. All of these patients have been relieved by multiple vaccination with smallpox vaccine at roughly weekly intervals on about 10 occasions. They now report for "booster" vaccination whenever they have a canker sore. While other mechanisms are undoubtedly operative, this experience suggests the possibility of viral origin in some of these cases.*

George B. Hood, M.D.
245 Radcliffe St., Bristol, Pa.

* Queries and Minor Notes, J.A.M.A., March 26, 1955, p. 1174.

TONGUE SUCKING*

TO THE EDITOR.—*A 4-year-old boy is addicted to "tongue sucking," both day and night. During the night he clamps the front of his tongue between his teeth and sucks the posterior portion. Is there anything that can be done to discourage this?*

M.D., North Dakota.

This inquiry was referred to two consultants, whose respective replies follow.—ED.

ANSWER.—Tongue sucking is an activity similar to thumb sucking. It usually disappears by the second year of life. Under such conditions the habit is harmless but annoying. The fact that this has persisted until 4 years of age would make one wonder if there is not an organic background, such as irritation of the gums or teeth or an allergic irritation of the roof of the mouth. It may also be caused by macroglossia, as in cretins and mongolian idiots. If none of these exist, an emotional disturbance of some kind should be sought for. Certainly, if persisted in, it could cause some malformation of the teeth or jaws. Giving the boy something to suck or chew might help temporarily.

ANSWER.—Tongue sucking belongs to a group of habitual body manipulations usually seen during the period of infancy. Most of these practices are harmless and disappear spontaneously before the preschool age period. Persistence of this habit up to 4 years of age is relatively uncommon and is usually associated with other behavior problems. It is often seen in children in whom thumb sucking is prevented by the use of restraints or who have macroglossia. There is no serious significance to this habit, and it will usually disappear as the child finds adequate solution for his emotional problems.

* Queries and Minor Notes, J.A.M.A., April 9, 1955, p. 1360.

TRIGEMINAL NEURALGIA*

TO THE EDITOR.—*I have seen several patients with the diagnosis of trigeminal neuralgia, with involvement of the maxillary division. The site of pain has been only in those areas supplied by the nerve after its exit from the infraorbital foramens; that is, the inferior palpebral, lateral nasal, and superior labial areas of distribution. Injection with alcohol at the infraorbital foramens has given good but not prolonged benefit. What result could be expected from division of the nerve at its exit from the infraorbital foramens? Studies to determine cause have been negative.*

Joseph F. Campana, M.D.
Williamsport, Pa.

ANSWER.—Division or avulsion of the infraorbital nerve at its exit from the infraorbital foramen also will give only temporary relief from pain, although somewhat more prolonged than that usually obtained from the injection of alcohol. The only permanent relief that can be obtained with certainty is from the well-established procedure of partial sec-

tion of the trigeminal nerve back of the gasserian ganglion. This is a simple and safe operation in the hands of a competent neurosurgeon and should be recommended in cases of trigeminal neuralgia where the pain has recurred or has not been relieved by injection of alcohol or division of the infraorbital nerve.

* Queries and Minor Notes, J.A.M.A., April 23, 1955, p. 1586.

PTYALISM DURING PREGNANCY*

TO THE EDITOR:—*A patient has marked ptyalism and postnasal drip whenever she is pregnant. Whenever any solid or liquid is consumed, secretion immediately increases so greatly that emesis soon follows. Every known drug has been used to no avail; this has occurred with each of her three pregnancies.*

M.D., New York.

ANSWER.—There is no satisfactory treatment for the unusual complication of ptyalism during pregnancy. Phenobarbital, 1/8 grain (7.5 mg.) every six hours, may be of benefit in controlling the nervous factor that is almost always present. Swallowing of the excess saliva usually precipitates vomiting. Because fluid loss may be considerable in this syndrome, attention must be directed to replacement. Atropine and related drugs have proved to be of no benefit. The condition usually corrects itself at about the fifth month of pregnancy.

* Queries and Minor Notes, J.A.M.A., April 16, 1955, p. 1457.

PROPOSED THEORY FOR INVESTIGATION OF CANKER SORES*

TO THE EDITOR:—*Has anything new been discovered about recurrent "canker sores" or aphthous stomatitis? I have noted a finding that may give some investigator a clue. In several of my patients as well as in myself, whenever one develops it appears that an aphthous patch comes out on the papilla of the parotid duct or in the floor of the mouth near the sublingual ducts. Could there be a connection with some agent in the saliva or a chemical change in the saliva that may precipitate the local break in the mucous membrane that then results in a "canker sore"? If, as many suspect, aphthous stomatitis is due to an allergy or some gastrointestinal upset, why do not these ulcerations appear elsewhere in the gastrointestinal tract, rectum, or vagina?*

A. J. Smatko, M.D., Santa Monica, Calif.

ANSWER.—The inquiring physician has proposed a theory that might well be a subject for careful investigative work. At present there is known no specific noxious agent or chemical change in the saliva that would cause aphthous stomatitis starting on the papilla of the parotid duct or near the sublingual ducts. No such agent has been demonstrated except in heavy metal poisoning, such as by mercury and lead, which are excreted in part by the salivary glands. It is more likely that the local lesions in the mouth represent a local manifestation of systemic disease. Such lesions have actually been demonstrated at sigmoidoscopy in allergy, leukemia, agranulocytosis, uremia, and tuberculosis. Intestinal manifestations of systemic disease occur in many disorders, like oral manifestations of systemic disease, and were not recognized until intensive sigmoidoscopic examinations were carried out. Sometimes intestinal symptoms are completely absent, but usually abdominal pain and diarrhea are present in the case of ulcerated lesions, and sigmoidoscopy reveals the same type of inflammatory reaction as is seen in the mouth. The mechanism in the bowel is generally the indirect hematogenous excretory mechanism (as in plumbism), in which the noxious agent is transported in the blood stream from a distant focus and is excreted through the wall of the bowel into the lumen. A similar mechanism may explain the lesions in the mouth if the offending agent cannot be demonstrated in the secretion of the salivary ducts.

* Queries and Minor Notes, J.A.M.A., Jan. 15, 1955, p. 301.

CLEFT LIP AND PALATE*

Cleft lip and palate occur with regularity in one birth in a thousand. The only recognized etiological factor is heredity, though since one or two generations may be unaffected its application is often obscure. . . . In 50% of cases the cleft extends right through lip and palate, while in the remaining 50% clefts confined to the lip or palate are of approximately equal occurrence. There is an unequal distribution between the sexes, boys being the subject of cleft lip twice as often as girls, while the ratio is reversed in the palate. The left side of the lip is more often affected than the right, and single clefts of the lip are three times as common as the double clefts—W. G. Holdsworth, M.D., Cleft Lip and Palate, *Medical Press*, Sept. 22, 1954.

* J.A.M.A., Dec. 25, 1954, p. 1579.

THE FALLACY OF THE FURRED TONGUE*†

A deep-rooted belief exists in both lay and medical minds that a dirty tongue, in a child not suffering from an acute illness, is of significance. Statistical analysis of the state of the tongue in 750 children shows that there is no connection between a furred tongue and the presence of a free nasal airway, the presence of cervical lymphadenopathy, a poor appetite, or the action of the bowels. Similarly, no association can be shown between the state of the tongue and a

variety of abnormalities ranging from tongue-tie to tics and from murmurs to mongolism.

* Medical Literature Abstracts, J.A.M.A., Feb. 12, 1955, p. 623.
† By B. Gans. Brit. M. J. 2:1146-1147 (Nov. 13) 1954 [London, England].

ODOR ON BREATH*

TO THE EDITOR—*I have seen many cases of chronic, debilitating diseases in which there is a fecal character to the odor of the breath, even in patients having daily stools. The odor seems to originate in the breath that comes from the lungs. They have, in some cases, a tendency to constipation, but no gastrocolic fistula. What is its significance?*

John W. Cooper, M.D., Honolulu, Hawaii.

ANSWER.—Intestinal gases are absorbed and eliminated through the lungs. It has been shown that medicaments inserted into the rectum in the evening can be obtained from the back of the tongue the next morning. This fact would suggest that there is a constant elimination of gases from the digestive tract through the lungs. This and the constant growth of bacterial flora in the mouth are believed to be largely responsible for the problem in question.

* Queries and Minor Notes, J.A.M.A., Feb. 12, 1955, p. 626.

RHEUMATOID ARTHRITIS*

TO THE EDITOR:—*A 55-year-old postmenopausal white woman has fairly severe rheumatoid arthritis since 1951. She has on occasion responded temporarily to cortisone and corticotropin (ACTH) together with estrogenic hormones; however, the side-reactions or overeffects of these drugs have restricted their use. A year and a half ago therapy was begun with gold sodium thiomalate (Myochrisine), and she had a favorable response. However, after receiving 300 mg. over a period of many weeks, she developed a severe stomatitis. The gold was immediately stopped with the onset of the stomatitis. She was not taking cortisone at the time, and no BAL was used in the treatment of this toxic reaction. In view of the previous remission, would it be advisable to begin a new course of gold, possibly in conjunction with cortisone? If you feel trying gold again is justified, should a new product be used? Has previous experience shown that, if toxic reactions develop to gold in one course, they are likely to develop if gold is used again?*

Clark Rodman, M.D., Washington, N.C.

ANSWER.—Patients who have had toxic reactions during previous courses of gold therapy are likely, but not certain, to have them again in subsequent courses. The previous occurrence of stomatitis alone is not generally considered an absolute contraindication for great caution in dosage and careful observation of the patient. In the case cited it would seem justified to try another course of gold in smaller doses if other available measures of treatment do not adequately control the arthritis. It is doubtful that the use of equivalent doses of the other preparations of gold salts would be less likely to produce toxic reactions. There is currently considerable dispute as to the advantages, if any, of the combined use of gold and cortisone, but the concomitant use of these two measures of treatment may be considered for patients whose severe, active arthritis does not respond adequately to one or the other form of treatment. Whether gold or cortisone or both are used, general measures of treatment such as physical medicine, rest, protection of joints, and simple analgesics also should be used.

* Queries and Minor Notes, J.A.M.A., Feb. 19, 1955, p. 694.

SILVER NITRATE STAIN*

TO THE EDITOR:—*Please let me know how to remove silver nitrate stain from the skin.*

Bernard Marcus, M.D., Raritan, N. J.

ANSWER.—The following solutions have been reported to be effective in the removal of recent and superficial stains caused by silver nitrate: 10% potassium iodide; a mixture of 10% mercuric chloride and 10% ammonium chloride; and a mixture of 1% potassium ferricyanide and 6% sodium thiosulfate.

* Queries and Minor Notes, J.A.M.A., Feb. 26, 1955, p. 782.

THE WELL-FED CHILD'S BREAKFAST*

Children receiving liberal supplies of ascorbic acid at breakfast were the ones who generally had good diets, it was found in a statewide research program reported on by Drs. Ercel S. Eppright and Pearl P. Swanson, Department of Food and Nutrition, Iowa State College. Vitamin C nutrition, was less than optimum for many Iowa School children and actually poor for approximately one-fourth. The doctors suggest that the nutritive balance of the children's dinners could be improved by an increased use of ascorbic acid-rich foods and milk. Snacks, too, were found to be poor in ascorbic acid-rich foods and should be improved, Drs. Eppright and Swanson state.

* Journal of the American Dietetic Association, 31:256, 1955.

Book Reviews

Gnathology, A Research Report, B. B. McCollum & C. E. Stuart, 123 pp, 24 illustrations, Scientific Press, South Pasedena, Calif., Jan. 1955, $5.00.

This work embodies the concepts that McCollum and Stuart have matured in over thirty years of association, and which are largely the product of the Gnathological Society which McCollum founded in 1926. To quote from the introduction (p. 6): "With Dr. Harvey Stallard, he (McCollum) coined the word *Gnathology* to describe the study and treatment of the entire mouth as a functioning unit." In 1930, to quote further from his introduction, "he, (McCollum) developed the first instrument capable of duplicating the *exact* movements of the mandible," and: "Four years later, in cooperation with Dr. Charles E. Stuart, he developed the first instrument capable of recording these *exact* mandibular movements." In the succeeding twenty-one years, increasingly accurate models of their articulator or Gnathoscope have been produced. These involve the use of changeable condyle path inserts (seven pairs at present), and controls for Bennett movement. "At the present time, "Dr. McCollum states (p. 74) "this seems to serve our purposes. However, *as we work more accurately,* we may find it necessary to add paths with in-between curvatures [for condyle paths]."

With regard to Bennett movement McCollum states (p. 76): "The shape of the Bennett movement path has as much as, and probably more, influence upon the articulating surfaces of the teeth than any other component of jaw motions." And a little later (p. 79): "The Bennett path, *other than being an irregular curve,* may not go directly laterally, but may slope upward, downward, backward or forward." It may be pertinent to point out in this connection that "the new instrument" (which is represented in the text fig. 21) has provision for only straight line Bennett movement.

There can be no doubt that McCollum and his colleagues have almost exhaustively studied mandibular movements, and that they have scientifically evolved a technique capable of reproducing them with some degree of accuracy. McCollum's contribution to "A Research Report" concludes: "Dentistry must prove its worth as a health service if it is to take its deserved place as one of the learned professions."

From Dr. McCollum's closing statement quoted above, which is in effect a summary, it would seem that dentistry has neither proved its worth as a health service, nor achieved status. These are indeed serious indictments that warrant substantiation before being presented as fact. The reviewer not finding substantiation in the text, and not subscribing to similar opinion, must of necessity object in clear and certain terms. The value of dentistry to society as a health service and profession is so obviously patent that one hesitates to defend the premise. One has merely to imagine a society without dentistry to estimate its worth. The good that dentistry has done and is doing in alleviating misery, in making life more liveable and in healthfully prolonging it is incalculable. Such achievements were not cheaply gained, nor should they be glibly discounted.

It would seem further, that after Dr. McCollum in his introduction has told us a little about himself and his achievements, that he strikes momentarily a more humble chord (in a minor key, as it were), and we quote from the opening paragraph of his chapter on Oral Physiology (p. 18): "So far, immunity against dental and paradontal diseases remains much of a mystery. Thus on the one hand we know not how to establish or fortify immunity and, on the other hand, the dental tissues will not automatically heal themselves. . . . To a great extent they [dentists] must work in the darkness of the unknown."

After this brief sally into introspective doubt, McCollum quickly regains full confidence and volume, and goes on to develop his theories and mechanics of therapy with commendable zeal, clarity and vigor. He never thereafter falters as to hypothesis, treatment, or plan based on hypothesis. His cure is sure and none other. To prove this, Dr. McCollum and Dr. Stuart join voices to condemn, "a case of attempted reconstruction which shows inlays and bridges with good margins, but in which articulation was unavoidably disregarded because jaw relations were not duplicated on the articulating instrument." Roentgenograms of the case before breakdown are illustrated (p. 122). The work closes with the statement: "The case failed miserably in less than a year because the teeth were not articulated." Although one must admire such bluntness and conviction, one cannot help but wonder as to what happened to that small voice of doubt that whispered earlier in the same text, "We know not how to establish or fortify immunity," and to the humility that goes with healthy doubt.

Nevertheless, McCollum's chapter on oral physiology is effective. This in combination with his other two chapters on diagnosis and restorative

(Italics are author's)

fundamentals form a plane of departure for Stuart's excellent chapter on articulation. The latter's treatment of the principals of articulation is clear and informative. It would be a rare practitioner or student of dentistry indeed, whose understanding of the complex problem of occlusion would not be enhanced by this work.

The bibliography consists in a single reference: an excellent article by Stallard on dental articulation.

ARTHUR N. YOHAI

The Chemistry of Living Cells, by Helen R. Downes, Professor of Chemistry, Barnard College, Columbia University, Harper & Brothers, 1955, 549 pages.

This is a remarkable introduction to biochemistry, especially for students interested in medicine, zoology, botany or related fields. The author's style is so lucid that every approach to the mechanism of living cells is vivid and fascinating. Dr. Downes actually makes biochemistry an interesting science. The historical approach is used throughout in the belief that students should be introduced to outstanding scientists to sense the nature of a great intellectual adventure, to understand how it progressed and to appreciate the qualities indispensable in the making of a scientist. All dynamic aspects of biochemistry are presented with specific experimental data. There is no attempt to cite individual authorities for fundamental statements although references are given at the end of the chapters. After preliminary consideration of the laws of solutions and the chemistry of food stuffs, the author presents clear discussions of the organic components of cells and the complex transformation which takes place in them. The work is a credit to an excellent teacher and lucid portrayer of a difficult subject.

I. NEWTON KUGELMASS, M.D.

Taber's Cyclopedic Medical Dictionary, 1312 pages, 298 illustrations, thumb indexed, $4.75.

This is the sixth edition, brought up to date in context and in format. As the term "Cyclopedic" in the title implies, the aim has been to make this work more than just a dictionary, and to supply much more information than a definition of each word. Every word has been examined for the possible effect upon it of new developments in medical practice, and extensive changes have been made. Special attention has been given to the vocabulary needs of students, nurses, physicians, and specialty groups. The appendix has been lengthened by the inclusion of much new material. Pronunciation is plainly indicated, each word being spelled first correctly, and then phonetically, with accents clearly marked. The etymology of each word is also given.

Complete information is given on many nursing procedures, to the extent that it is claimed that the work is an epitomy of nursing textbooks. Over 600 drugs are described in detail, including uses, incompatibilities, dosage and antidotes. Foods and beverages are described with composition and all important facts about them. There is a section on first aid, and in the appendix, in quickly available form are many tables pertaining to drugs, foods, the measuring systems, nerves, muscles, the vitamins, and many others. An interesting section is "The Interpretor", which lists 373 most used questions and directions with translation thereof into four other languages. This book should be a valued addition to any library.

HAROLD E. BRENNAN

1955 Medical Progress, a Review of Medical Advances During 1954, by Morris Fishbein, M.D., Blakiston Division, McGraw-Hill Book Company, New York.

Every field of medicine has been benefited by new advances during the year 1954. In particular, much of the advance is related to the introduction of new antibiotics and other new drugs which have application in many fields. For instance, cortisone is now available in several forms and finds application in almost every field of medical practice. A new drug called Diamox, which has the remarkable property of eliminating fluid from the tissues and is nonmercurial has been used in congestive heart failure, in glaucoma, in emphysema, and in many other conditions. Similarly chlorpromazine, which was introduced only recently into medical practice, is now used in many different fields, especially important is the use of chlorpromazine in anesthesia, for the lowering of temperature, and in a variety of mental disturbances. Apparently, drugs of this type now available modify the metabolism of the tissues of the brain and have far-reaching effects. The field of roentgenology has been greatly benefited by the introduction of new contrast media. These make possible the detection of stones in the bile ducts which may remain after cholecystectomy and which may explain the persistence of symptoms after such surgery.

The progress of medicine seldom begins with discoveries that arise at any given moment in any year. Each development that occurs is in a subject which may go back to the distant past. Only enough of such background is included to permit proper orientation. Less than a quarter of a century has passed since studies of nutrition, enzymes, electrolytes, hormones and even biochemistry began to loom large on the medical horizon. Today more than ever the basic sciences—physics, chemistry, biology, anatomy, physiology—are split into highly specialized areas and have profound implications for the study of the diagnosis, prevention and treatment of disease. Many an older physician will find some of the dis-

cussions in this book a little advanced, yet the younger physicians may take these in their stride and go on to further advances. The book which recapitulates the progress of the past offers firm ground from which to take off for a flight into the future.

I. NEWTON KUGELMASS, M.D.

A Comprehensive Review of Dentistry, by Vincent R. Trapozzano, D.D.S., F.A.D.P., with the collaboration of 24 contributors. Second edition, W. B. Saunders Co., Philadelphia, 665 pages, $8.00.

The second edition of this text which is used in preparing for State Board Licensing Examinations, has been enlarged and brought up to date. Twenty-four contributors, each one an outstanding authority on his respective subject, have contributed to make this volume one of the finest and most accurate texts to be used by the student and practitioner for a review of dentistry. Its primary purpose is to serve as a concise, authoritative guide for student and practitioner.

The material is presented in the form of questions and answers and serves as an excellent review. At the end of each chapter there is a list of references so that the reader may seek further and more detailed information on each subject.

Dentistry in Public Health, by W. S. Pelton, B.S., D.D.S., M.S.P.H., and J. M. Wisan, D.D.S., M.S.P.H., 2nd edition, W. B. Saunders, Philadelphia, 1955. 282 pages, 54 illustrations. $6.50.

When first reading the title of this book it would seem to be a book of limited scope and audience. However, further reading indicates that it is a book worth the attention of every dentist and physician interested in Dental Medicine.

The dentist in the Public Health Service at the national, state and local level will find this book an absolute necessity. Particularly the chapters on "Administrative Principles in Dental Public Health" and "Surveys and Evaluation of Dental Programs." Every practitioner vitally interested in his community health problems will have at first hand the epidemiology of caries, periodontal disease and diseases of the other soft tissues of the oral cavity.

The controversial issue of flouridation is well handled. To speak intelligently to our patients and before lay audiences on this problem requires the material contained in this book.

An old problem, that of acute necrotizing ulcerative gingivitis, (Vincent's infection) is thoroughly discussed. Doctor Albert L. Russell, D.D.S., M.P.H., a contributor, writes the following: (p. 138)

> Females are apparently as susceptible as males, and the disease affects civilians as well as military personnel. In troops, at least, the disease has occurred in outbreaks which resemble epidemics; isolation of the patient and sterilization of his personal effects were common military practice, on the premise that the disease was contagious. But doubts as to the communicability of the disease were expressed as early as 1886 by Hirsch. Rosebury, on the basis of modern evidence, concluded in 1942 that communicability has been neither proved or disproved. A research commission of the American Dental Association reported in 1945 that "there seems to be no clear or convincing direct or other evidence" that the disease is in fact communicable. No finding which would modify this conclusion had been published through 1950 in the opinion of participants in the University of Michigan periodontal workshop, who concluded that "at the present time, Vincent's infection cannot be considered communicable."

An additional advantage of this book is the tremendous bibliography. The chapter on the prevention and control of dental diseases alone lists 411 bibliographic references in addition to about 100 suggested reading references. This is about the number for each chapter.

There is an elementary chapter of the elements of statistical methods which will help research workers in setting up experiments to prove hypotheses and to help in the handling of data and observations.

NATHAN WACHTEL

AMERICAN ACADEMY OF DENTAL MEDICINE TENTH ANNUAL MEETING

The Michigan Section will be the hosts for the Tenth Annual Meeting of the American Academy of Dental Medicine which will be held at the Statler Hotel in Detroit, June 21st through June 24th, 1956.

The theme for this meeting will be "Systemic Disease". The oral manifestations of systemic diseases and the role of the dentist in treatment will be discussed. A complete program will appear in a future issue of the Journal.

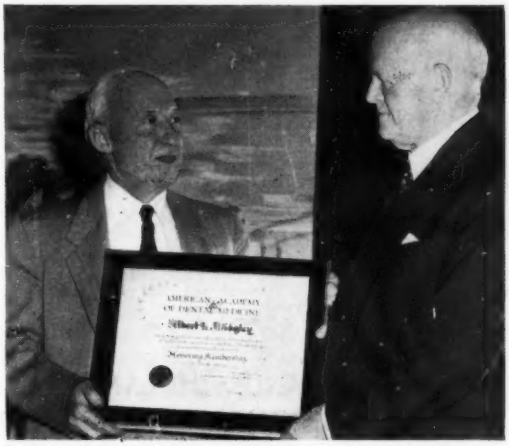
JAMES R. LADD, *Co-Chairman*

Academy Proceedings

HONORARY MEMBERSHIP AWARDED TO DR. ALBERT L. MIDGLEY

During the Ninth Annual Meeting of the American Academy of Dental Medicine honorary membership was awarded to Dr. Albert L. Midgley of Providence, R. I. by retiring President George F. Clarke.

Dr. Midgley has practiced dentistry continuously in Providence since 1901 and since 1906 has been actively interested in the promotion of dental education with the view of placing it solely under university control and auspices.



Retiring President George F. Clarke presents the Honorary Membership Plaque to Dr. Albert L. Midgley.

Graduated from Brown University in 1898, Dr. Midgley was graduated cum laude from Harvard University Dental School in 1901. He has also received a Doctor of Science degree from Marquette University in 1922 and a similar degree from Temple University in 1934. Dr. Midgley was elected as a Fellow of the American College of Dentists in 1921. He has been associated with several hospitals in the Providence area since 1901. Dr. Midgley taught for many years at Harvard University Dental School and at the Forsyth Dental Infirmary in Boston. He has contributed articles about various phases of dentistry which have appeared in local, state and national dental journals. Since 1903 he has presented papers and clinics before many local, state and national dental organizations as well as the Providence Medical and Rhode Island Medical Societies.

Throughout the years, Dr. Midgley has been actively interested in the enforcement of entrance requirements, preprofessional collegiate education, more and extensive research, and revision of dental statutes to meet the ever changing environment of dentistry as a division of health service.

The Academy of Dental Medicine is indeed proud that so distinguished a member of our profession has accepted honorary membership in our organization. The great advances that dentistry has made in the last half century can be attributed to such dental pioneers as Dr. Albert L. Midgley.

ACADEMY FELLOWSHIP AWARDED POSTHUMOUSLY TO PAST PRESIDENT ALVIN H. BERMAN

At the Ninth Annual Meeting of the American Academy of Dental Medicine, the late Past President, Alvin H. Berman was posthumously awarded a Fellowship in the Academy. Dr. J. Lewis Blass reviewed Dr. Berman's accomplishments, first as Treasurer of the Academy, then as President-elect, and finally as President. He told of the vigor and diligence, the devotion and love Alvin H. Berman had for the Academy of Dental Medicine.

Dr. J. Lewis Blass presents a Fellowship in the Academy to Mrs. S. Leonard Rosenthal who accepts the award for her close friend Mrs. Berman, the wife of our late Past President, Alvin H. Berman.

Because of Mrs. Berman's inability to attend our Annual Meeting, her very close friend, Mrs. S. Leonard Rosenthal accepted the Fellowship on her behalf.

Although his loss leaves a void in the ranks of the Academy, organized dentistry, and his family, Alvin H. Berman will always be remembered for his many contributions to dentistry.

"STRESS" AND "IMPLANT DENTURES" HIGHLIGHT NINTH ANNUAL MEETING'S SCIENTIFIC SESSIONS

The scientific program of the Ninth Annual Meeting of the Academy was composed of nine excellent speakers each an authority in his own field. The subject of "Stress" was thoroughly discussed and evaluated. Dr. Herbert S. Kupperman spoke on "Stress and the General Adaptation Syndrome" while Dr. Victor H. Witten discussed "Effects of Stress on the Oral Mucosa." "The Physiological Aspects of Stress" was presented by Dr. Lawrence E. Hinkle, Jr. while Dr. Albert Stunkard discussed "The Psychological Aspects of Stress." The material that was presented by the four speakers was summarized by Dr. Samuel Charles Miller who acted as moderator, and a general discussion followed.

Dr. James E. Perkins addressed the Academy membership and their ladies on the "World Health Organization." His remarks received a great deal of attention in the local press.

The Implant Denture Seminar was composed of Dr. Isiah Lew, Dr. Stanley J. Behrman, and Dr. M. A. Pleasure. A very lively question and answer period followed this discussion.

Drs. Ira Ross and George Witkin are to be complimented on their excellent choice of speakers. The essayists held the attention of all the members present and provided an interesting question and answer period at the conclusion of their presentations.

ESSAYISTS AT NINTH ANNUAL MEETING OF ACADEMY

Herbert S. Kupperman, M.D., Ph.D. Samuel Charles Miller, D.D.S. Victor H. Witten, M.D.

Lawrence E. Hinkle, Jr., M.D. Albert Stunkard, M.D. James E. Perkins, M.D., D.P.H.

Isaih Lew, D.D.S. Stanley Behrman, D.D.S. Max A. Pleasure, D.D.S., M.S.P.H.

ACADEMY MEMBERS IN THE NEWS

It has come to the attention of your editor that several of our members will be lecturing abroad this summer and spreading the fame of the American Academy of Dental Medicine. Dr. Samuel Charles Miller will lecture in Venice, Italy; Dr. S. Leonard Rosenthal will be in Copenhagen, Denmark; and Dr. Allan N. Arvins will

lecture in Mexico City, Mexico. . . . Congratulations to Mrs. Hedwig Turkenkopf, wife of Sam Turkenkopf, who has recently been elected to the Cedar Grove, New Jersey Municipal Council. She is the only woman member of this group. . . . Our best wishes to Dr. & Mrs. Samuel Charles Miller on the recent marriage of their daughter Steffie to Dr. Leonard Nishman. . . . The class of 1955 at New York University College of Dentistry has recently awarded a certificate to Dr. Allan N. Arvins "In Appreciation of Distinguished Services Rendered to the Student Body." . . . Several Academy members have recently become Diplomates of the American Board of Periodontology. They include Nathan Wachtel, I. Michael Harris, Marvin Simring, Howard L. Ward, and S. Sigmund Stahl. . . . Dr. J. Lewis Blass will visit dental schools and colleagues during his vacation to Central and South America.

NEW MEMBERS ELECTED AT NINTH ANNUAL MEETING OF AMERICAN ACADEMY OF DENTAL MEDICINE — MAY 14th, 1955

ABELOFF, ROBERT D.
Brooklyn, N. Y.

AUGUSTINE, ALFRED
Miami Beach, Florida

BEHRMAN, STANLEY
New York, N. Y.

BERKMAN, HARRY A.
Amsterdam, N. Y.

BRESSMAN, EDWARD
Irvington, N. J.

CACCIATORE, ANGELO C.
Floral Park, N. Y.

CLUG, BERNARD
New York, N. Y.

COCCARO, PETER J.
Brooklyn, N. Y.

COLLINS, WILLIAM C. G:
Ottawa, Canada

CROSS, ARTHUR A.
Ithaca, N. Y.

DEJOLY, GOLDA G.
Buenos Aires, Argentina

DESATNEK, HENRY L.
Brooklyn, N. Y.

DICKENSON, JAMES
Ashland, Kentucky

DUMMENT, CLIFTON O.
Tuskegee, Alabama

DUNN, JOHN K.
Cleveland, Ohio

EWEN, SOL J.
New York, N. Y.

FALLON, WALTER W.
Great Falls, Montana

FARRIS, EDWARD T.
Dallas, Texas

FRUMKER, SANFORD C.
Cleveland, Ohio

GIBBS, STANLEY
New York, N. Y.

GLICKSTEIN, FELIX
Jacksonville, Florida

GREENE, HENRY I.
Flushing, N. Y.

GREENWOOD, ALAN H.
St. Louis, Mo.

GRUBER, IRVING E.
Brooklyn, N. Y.

HERNANDEZ, JOSEPH
Jersey City, N. J.

KANE, SAMUEL D.
East Boston, Mass.

KAPLAN, HYMAN S.
Plymouth, N. H.

KOSTER, SEYMOUR
New York, N. Y.

KRIEGEL, SHELDON I.
Amsterdam, N. Y.

LEVENSON, SAUL J.
Elizabeth, N. J.

LIFTON, HERMAN M.
Melvindale, Michigan

MANDEL, FRANK P.
Bedford, Ohio

MARTIN, PETER T.
Baker, Oregon

MASLANSKY, MANUEL M.
White Plains, N. Y.

MOODNIK, RICHARD M.
Cambria Heights, N. Y.

O'LEARY, TIMOTHY J.
Levittown, N. Y.

PALERMO, RUDOLPH W.
Brooklyn, N. Y.

PARRIS, LEONARD N.
Philadelphia, Pa.

PATUR, BENJAMIN
Hartford, Conn.

RAIMIST, CLIFFORD
New York, N. Y.

RATTNER, HAROLD
Detroit Michigan

ROUSH, HARRY
Arlington, Va.

RUBENSTEIN, JOSEPH L.
Paterson, N. J.

RYAN, KENNETH, J.
Flint, Michigan

SANDERS, ABE L.
Atlanta, Georgia

SELVERSTONE, JONAS
New York, N. Y.

SHEPPARD, IRVING
New York, N. Y.

SIGISMOND, LOUIS A.
Detroit, Michigan

SIMKINS, IRWIN L.
Johnstown, Pa.

SIMON, DONALD A.
Dearborn, Michigan

SIMSON, ALEXANDER L.
New York, N. Y.

SISKIN, MILTON
Memphis, Tennessee

STEIN, ROBERT S.
Boston, Mass.

STERN, MAURICE N.
Forest Hills, N. Y.

THALLER, JACK L.
Brooklyn, N. Y.

TOLKOFF, EDWARD
New York, N. Y.

TORO, GABRIEL
Colombia, So. America

TURNER, TIM
Toronto, Canada

VAZIRANI, SUNDER J.
Chicago, Illinois

WEISMAN, LEON B.
Philadelphia, Pa.

ZIMMERMAN, HERBERT I.
Middletown, Conn.

ZOLA, BORIS
Saginaw, Michigan

COMMITTEES 1955-1956

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Walter Levine, Baltimore, Md., *Chairman*
Louis R. Burman, Bronx, N. Y.
Arthur Gold, Springfield, Mass.
Leon Sukin, Philadelphia, Pa.

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Theodore Lite, Brooklyn, N. Y., *Chairman*
Nathaniel Levy, Atlantic City, N. J.
Lester B. Older, Union City, N. J.
Wilfred J. Johnston, Montreal, Canada.
Leon W. Scott, New Rochelle, N. Y.
Jacob A. Englander, Jersey City, N. J.
Edwin M. Speed, Birmingham, Ala.

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Louis J. Rosen, Montreal, *Chairman*

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Harry Roth, New York, N. Y.
Louis B. Kelsten, Newark, N. J.
Jacoby T. Rothner, Philadelphia, Pa.
George Bruns, Boston, Mass.

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Lester B. Weiss, New Haven, Conn.
Harold E. Brennan, New York, N. Y.
Albert Laferriere, Montreal, Canada.
Sarah Kaplan, Philadelphia, Pa.
Irving Abramson, Baltimore, Md.
James R. Ladd, Pontiac, Mich.
Earl Stone, Wollaston, Mass.

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Samuel Charles Miller, New York, N. Y., *Chairman*

RESIDENCY IN ORAL MEDICINE

Sidney Sorrin, New York, N. Y., *Chairman*

HISTORIAN AND NECROLOGIST

William M. Greenhut, New York, N. Y.

PROGRAM

William M. Greenhut, New York, N. Y., *General Chairman*

1955 Mid-Winter Meeting

Alonzo N. De Vanna, New York, N. Y., *Chairman*
Norman E. Alderman, New York, N. Y., *Co-Chairman*
A. Cannistraci, New York, N. Y.
George Goldberg, Jackson Heights, N. Y.
Abraham Reiner, St. Albans, N. Y.
Harry Roth, New York, N. Y.

1956 Annual Meeting

James R. Ladd, Pontiac, Mich., *Chairman*
D. Chalmers Lyons, Jackson, Mich., *Co-Chairman*

PLANNING AND FINANCE

George F. Clarke, Boston, Mass., *Chairman*
Harold Gelhaar, Upper Montclair, N. J.
Louis R. Burman, Bronx, N. Y.
J. Lewis Blass, New York, N. Y.
Samuel Charles Miller, New York, N. Y.
Sidney Sorrin, New York, N. Y.
George A. Bruns, Boston, Mass.

SECTIONS

Samuel Turkenkopf, Newark, N. J., *Chairman*
Horton D. Kimball, Detroit, Mich.
Delegates of all sections.

EDUCATION

Samuel Charles Miller, New York, N. Y., *Chairman*
Edward Dobbs, Baltimore, Md.
Bernard Saturen, Philadelphia, Pa.

DENTO-MEDICAL RELATIONS

D. Chalmers Lyons, Jackson, Mich., *Chairman*
Edward Fischer, Fairfield, Conn.
David Tanchester, New York, N. Y.
Morton De Scherer, Englewood, N. J.
Bernard S. Chaikin, Boston, Mass.
Francis J. Fabrizio, Washington, D. C.
Maxwell Goldenberg, Montreal, Canada.

PUBLICATIONS

Irving Yudkoff, New York, N. Y., *Chairman*

RESEARCH

Emanuel Cheraskin, Birmingham, Ala., *Chairman*
Melvin J. Pomeranz, New York, N. Y.
Edgar James, Detroit, Mich.
Philip Ament, Buffalo, N. Y.
Theodore Lite, Brooklyn, N. Y.

REPRESENTATIVE, DENTAL INFORMATION BUREAU

William M. Greenhut, New York, N. Y.

MEMBERSHIP RETENTION

Marcel B. Archambault, Montreal, Canada, *Chairman*

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Announcements

POSTGRADUATE TRAINING IN PERIODONTIA AND ORAL MEDICINE
NEW YORK UNIVERSITY COLLEGE OF DENTISTRY

The following postgraduate courses in Periodontia and Oral Medicine will be offered at the New York University College of Dentistry and will be given by Dr. Samuel Charles Miller and Staff:

No. 124. REFRESHER COURSE IN PERIODONTIA AND ORAL MEDICINE
Ten sessions, Wednesdays, 4:00 to 6:00 P.M.
February 29, 1956 to May 10, 1956.
Tuition and books. $156.00. Instruments approximately $55.00.

Theoretical and practical application of periodontal diagnosis and techniques to general dentistry. Four lecture and six clinical demonstration sessions. Equilibration of occlusion is performed by the student on casts. Patient demonstrations include equilibration of occlusion, conservative and radical therapy, home care, etc.

No. 123. PERIODONTIA AND ORAL MEDICINE IN THE SPANISH LANGUAGE
Four weeks, Monday through Friday, 9:00 A.M. to 4:00 P.M.
April 2 to April 27, 1956 inclusive.
Tuition including books and instruments approximately $385.00.

Theoretical and practical application of Periodontia and Oral Medicine is fully explained and demonstrated. Equilibration of occlusion is performed by the student on casts. Lectures and clinical demonstrations of diagnosis and treatment planning, conservative and radical techniques, equilibration of occlusion, home care, etc. The entire course is conducted in the Spanish language.

No. 122. COMPREHENSIVE PREPARATION IN PERIODONTIA AND ORAL MEDICINE

No. 122 A. One academic year, full time. September 19, 1955 to May 25, 1956.
Tuition $1,010.00. Instruments and books approximately $135.00.

No. 122 B. Two academic years, full time. September 19, 1955 to May 24, 1957.
Tuition $1,770.00 (two years). Instruments and books approximately $231.00.

No. 122 C. Two academic years, half time. September 19, 1955 to May 24, 1957. (Two and one half days weekly.)
Tuition $1,010.00 (two years). Instruments and books approximately $135.00.

No. 122 D. Four academic years, half time. September 19, 1955 to May 29, 1959. (Two and one half days weekly.)
Tuition $1,770.00 (four years). Instruments and books approximately $231.00.

These courses are designed for comprehensive preparation in Periodontia and Oral Medicine and are of particular significance for certification towards specialization. All didactic and clinical phases are covered with the objective of developing expert proficiency.

Further information concerning the courses listed above can be obtained by writing to the Secretary, Postgraduate Division, New York University College of Dentistry, 209 East 23rd Street, New York 10, New York.

BETH ISRAEL HOSPITAL, BOSTON, MASS.

The Dental Department of the Beth Israel Hospital in Boston announces two postgraduate courses in Periodontia for the Fall of 1955.

A one week course in Occlusal Adjustment will be given from September 28, to October 2nd. This course will include background material on the anatomy; histology and physiology of the periodontium and dental apparatus. Diagnostic methods and treatment procedures for occlusal adjustment will be thoroughly discussed and demonstrated in the clinic. Participants will be limited to twelve. The tuition fee is $200.00.

A two week seminar in Periodontia is scheduled for October 31 to November 11th. The objective of this seminar is to present to the practitioner all of the techniques employed in periodontal therapy as well as theoretical background. It will include etiology, diagnosis and treatment of various diseases of the supporting tissues of the teeth. Periodontal pocket therapy as well as an over-all mouth rehabilitation program will be stressed. Local environmental factors and systemic influences in periodontal therapy will be discussed. The material will be presented by lectures, demonstrations and clinics. The tuition fee is $350.00.

Co-Directors of the Courses: Henry M. Goldman, D.M.D. and Bernard Chaikin, D.M.D.

For further information write to: Coordinator of Education Programs, Beth Israel Hospital, 330 Brookline Avenue, Boston 15, Massachusetts.

JOURNAL OF DENTAL MEDICINE ACCEPTING CASE REPORTS

The Journal of Dental Medicine will accept case reports starting with our October 1955 issue. Dentists and physicians who have interesting cases relating to some phase of dental medicine can submit them to the editor for consideration. All case reports that are submitted must be typed, double spaced, and on 8½ by 11 white paper. Three or four pictures can accompany each report but these must be on glossy paper.

TEMPLE UNIVERSITY SCHOOL OF DENTISTRY POSTGRADUATE COURSE IN ORTHODONTIA

Temple University announces a two-weeks course in Orthodontia beginning January 22, 1956, under the direction of Dr. Robert H. W. Strang.

This course is given to practicing Orthodontists only. The cost is $200.00, exclusive of instruments and books.

Applications can be made to: Dr. Louis Herman, Director of Postgraduate Studies, Temple University School of Dentistry, 3223 North Broad Street, Philadelphia 40, Pa.

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